

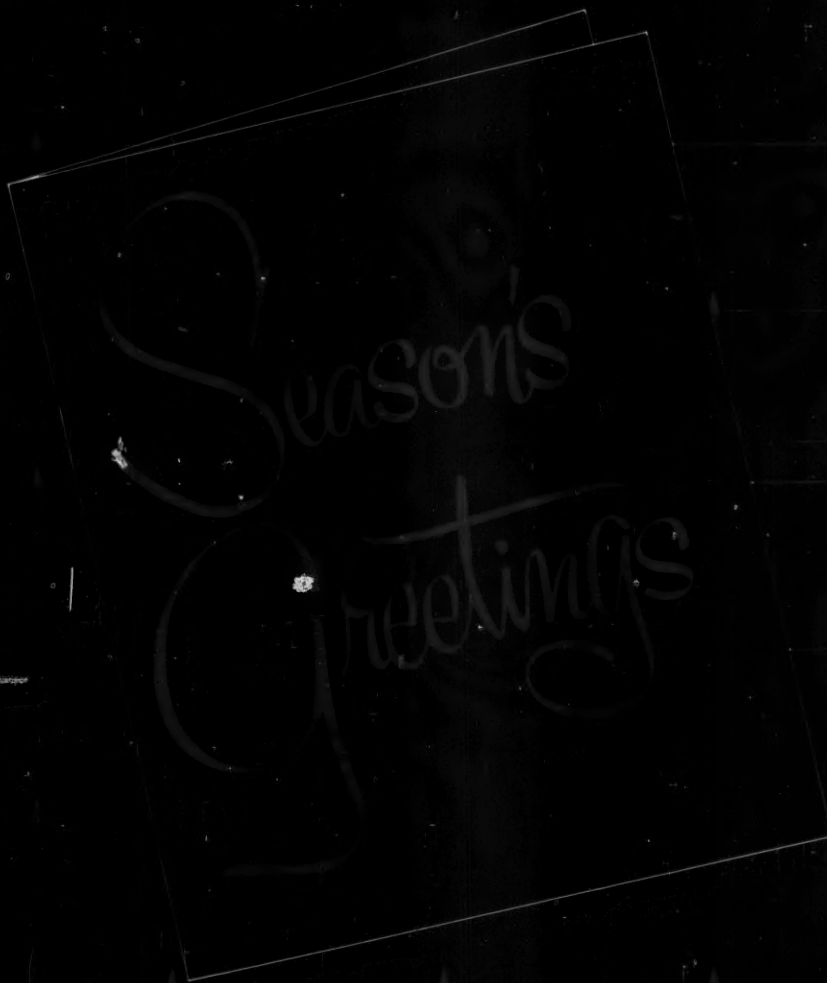
DECEMBER 1959

BUTANE-PROPANE *News*

- ▶ How do the top
- ▶ LPG salesmen
- ▶ SELL?

A CHILTON ① PUBLICATION

HEADQUARTERS FOR L.P. GAS INFORMATION SINCE 1931



WARREN PETROLEUM CORPORATION
TULSA, OKLAHOMA



Faster filling offered by new Hackney single-barrel tank truck

Everything you need to help you make more stops per day, keep operating and maintenance costs low and increase profits, is built into this brand-new Hackney single-barrel truck!

In quality, design and performance this truck is equal with the widely used Hackney twin-barrel models, and is thoroughly and rigorously tested to meet severest service and road conditions.

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Model 2500S: payload capacity (at 60° F.) 2215 gal.; weights: tank unit—empty, 8422 lb.; loaded, 17,792 lb.; nominal cab-to-axle requirements, 108". Another size is the Model 2800S: 2800-gal. (WC) capacity—payload, 2481 gal. (at 60° F.)



Hackney twin-barrel tank trucks available in payload capacities of 1465, 1795 and 2125 gallons.



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trucks and tractors



lift truck tanks



tank trucks



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DECEMBER, 1959



RELIANCE® LP- GAS CONTROL EQUIPMENT

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TYPE "HPR" HIGH PRESSURE REGULATORS High-pressure, primary pounds-to-pounds regulators for economical first and second stage regulation. Rugged and compact construction...for inlet pressures to 1000 psi and outlet pressures from 2½ to 350 psi. Also available with bronze body casting for inlet pressures to 2000 psi.

COMPLETE SPECIFICATIONS IN BULLETIN #48

TYPE "RV" & "DV" RELIEF, BACK PRESSURE AND DIFFERENTIAL VALVES "RV 200" and "RV 201" models provide reliable relief service on liquids or gases—maximum relief setting 225 psi. Installed on the by-pass line of liquid pumps, they relieve the set pressure and discharge the excess back to the suction side of the pump. "DV 200" and "DV 201" differential valves are used extensively on LP-Gas storage systems to maintain a safe differential across the pump and to minimize meter vapor lock.

COMPLETE SPECIFICATIONS IN BULLETIN #49



TYPE "HR" AND "KR" SERVICE REGULATORS House service regulators equipped with internal, mechanical relief valve. For inlet pressures to 125 psi, outlet pressures to 22 inch w.c. Mechanical relief valves may be set from 8 to 30 inches w.c. Toggle-joint action provides ample power for positive lock-up. Automatic shut-off valves available for all sizes and models.

COMPLETE SPECIFICATIONS IN BULLETIN #41

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COMPLETE SPECIFICATIONS IN BULLETIN #45



**AMERICAN
METER COMPANY**

INCORPORATED (ESTABLISHED 1936)



**RELIANCE®
REGULATOR DIVISION**

ALHAMBRA, CALIFORNIA

CONTENTS • DECEMBER 1959

Volume 21 - Number 12

BPN

Features Digest

- How do the top salesmen sell?** 25
Four top dealers were interviewed (see Power Section for fourth) to find out the answers. **William T. Harper**
- How does Felix Dodd sell three times the normal number of ranges?** 26
"Hard work!" Ever aggressive, he keeps his organization on its toes with a unique labor accounting system.
- How does Jesse Barfield sell 600 heaters a year without salesmen?** 29
With a thinly spread market he relies on heavy radio and newspaper advertising.
- How does Kingsley Weatherly "sell" his salesmen?** 32
Expensive gifts for their wives, tape-recorded customer reactions, and regular Monday morning sales meetings.
- Product tests the average dealer can use.** 35
A top executive of a top LPG distributor outlines ten ways the average dealer can minimize product losses and customer complaints. **E. R. Biggins**
- "Imported" clientele builds business for Washington, Mo.** 42
An unusual "enlightened self interest" story and a blueprint for the far-seeing, civic-minded dealer. **BPN field report**
- Combination truck so useful replacement is needed.** 46
One company's successful solution to that perennial perplexity, the out-of-gas call. **BPN exclusive**
- Automatic heating's 75th anniversary to be celebrated.** 48
Minneapolis-Honeywell solicits industry support for diamond jubilee program. **BPN staff report**
- Peat moss drying with LPG cuts freight costs 46 per cent.** 52
Hundreds, perhaps thousands, of processing firms could cut shipping costs by mechanical drying. **J. Arthur Thompson**
- America's biggest class market** 54
At its highest level since '53, the \$34.3 billion farm market includes \$2 billion spent annually for petroleum products.
- Keep a weather eye for construction heating loads.** 83
This one was so big that 6000 gal. storage were required at the site. **BPN exclusive**

Power

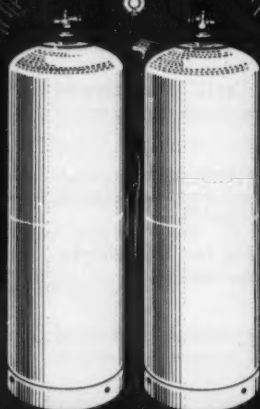
- What is it?** 84
This mechanical beast of burden has a strange look but a great future—and propane provides this comet's tail.
- How does Joe Rose make his really big sales?** 86
Preparation (a well-documented, all-angles-covered presentation) and persistence (as long as two years to make a sale).

Departments

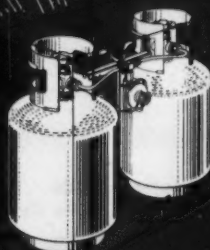
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|---------------------------------------------|----|-------------------|----|
| Advertisers' Index | 98 | Editorial Index | 93 |
| Associations | 70 | Highlights | 11 |
| Behind the Scenes | 6 | Letters | 17 |
| Beyond the Mains | 23 | News | 56 |
| Calendar | 68 | People | 73 |
| Classified | 91 | Power | 84 |
| | | Washington Report | 21 |
| What's New in Products and Trade Literature | | | 76 |

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Cylinder
Leasing
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**20 lb.
Trailer
Package**



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SINCE 1919.....40 Years of Manufacturing Experience



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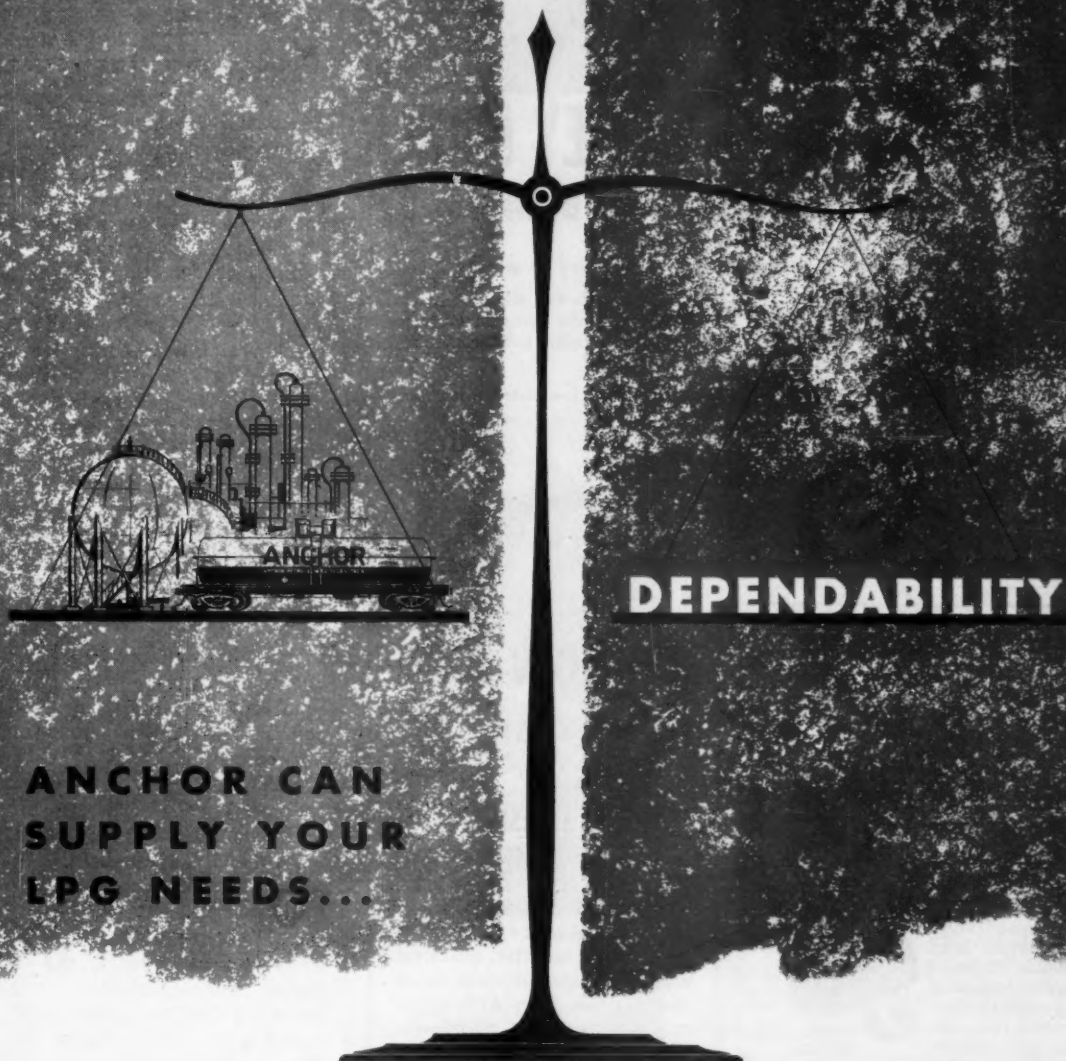
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BUTANE-PROPANE News

"WEIGH" OUT IN FRONT



**ANCHOR CAN
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NEW LP GAS-FIRED MONEY MAKER

the Johnson Radiant Pig Blanket

specially designed to keep pigs warm and dry in winter

Now you can offer hog raisers a brooder heater that takes the gamble out of winter farrowing. The Johnson Radiant Pig Blanket keeps two litters warm and dry in the worst winter weather. Lets the farmer farrow in the winter and get hogs to market when prices are highest.

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The Bottled Gas Manual has been accepted by many companies as the quickest way to acquaint new sales and service men with typical bottle gas problems. This 352 page (24 chapter) text book brings practical "working" facts to your entire staff in non-technical language. Nearly 10,000 copies in use.

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Butane-Propane News

198 S. Alvarado Street
Los Angeles

behind the scenes **BPN**

Unaccustomed as we are...

Beset by continuing problems, frequently frustrated by the inability to consummate ambitious projects, editors (like most everyone else) sometimes dream of retirement to a career as a parking lot attendant or crossing guard.

But just when things begin looking blackest, something big happens to get us on the enthusiastic track again. Sometimes it's a scoop—sometimes a hot idea that works.

It's not very often, though, that we are rescued from the doldrums in such a glamorous manner as we were in October. Suddenly, we found ourselves being entertained in the manner to which we'd like to become accustomed.

It started in Minneapolis, where Honeywell is laying plans for 1960's celebration of the 75th anniversary of automatic heat. With characteristic generosity, the company put on an all-expenses-paid conference for gas and heating magazine editors. The three-day program turned out to be more fun than work.

Eventually, our itinerary took us on to the LPGA Northeast Convention in Washington, D. C. This in itself was pleasant. But, surprise! Our Washington bureau had wangled us a ticket to the White House Correspondents' birthday party for the President. There we joined some 1000 guests (about 999 of whom you'll find in *Who's Who*) in singing Happy Birthday, Mr. President.

So, on second thought, we've decided the job does have its share, or more, of compensation. After the party, we had a few milkshakes with LPG friends who no doubt could buy and sell a passel of editors without denting the pocketbook. But *they* couldn't get in.

If they should want to buy us now, they'll find the price has gone up. We come high. Puh-lenty high.

Will she see
the 1960
Magic Chef
on your
floor?

*she will see it...**

- in Ladies' Home Journal
- in McCall's
- in Better Homes & Gardens, House Beautiful, Living, and Bride & Home.

*in all, 138,451,217 times!



put a Touch of
Magic

in your sales today with
1960 MAGIC CHEF Gas Ranges.

- * new Sculptured Styling
- * newest automatic features on any range — the MAGIC CONTROL CENTER with its fabulous calculator, the Dial-a-Magic Roasting Control
- * merchandising aids to tie in with extensive national advertising campaign
- * full profit margin for you!



see the 1960 MAGIC CHEF LINE
SPACE 1167
Merchandise Mart

BIGGER PAYLOAD DELIVERY UNITS

THE *Nor-Tex* FOUR STANDARD PAYLOAD SPECIAL CUSTOM DE LUXE

Available In Twin or Single Barrel Models



2500 WG Units Weigh Under 23,000 lbs. Loaded!

**You'll Haul
Extra Gallons
Each Trip!**

**You'll Deliver
Extra Gallons
Each Trip!**

**You'll Work Fewer
Hours... Drive
Less Miles!**

**You'll Earn
More Money The
Nor-Tex Way!**

Nor-Tex presents the newest development in sleek, LIGHT-WEIGHT, stream-lined twin or single barrel LPG Delivery Units and again Nor-Tex is FIRST with ALUMINUM SKIRTING and CABINETS and engineering designs which have reduced over-all weight. 3000 WG units and over are also available for use on cab over or cab forward trucks and are still within the 18,000-lb. axle limit.

Nor-Tex Custom units haul "extra" gallons each trip! You deliver "extra" gallons faster with Nor-Tex custom designed high flow plumbing. You take fewer hours and travel less miles to deliver a gallon of gas. For day in, day out efficiency, durability, payload, fast loading, high rated delivery, perfect balance and appearance Nor-Tex delivery equipment can't be beat!

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OR PHONE
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National Sales Agents for

Ideal In States Imposing Ton Mile Tax

Manufacturers of Fine LPG Equipment

Whatever your needs in LPG equipment there is a safe, profitable, factory tailored Nor-Tex unit ready for you. We are truck distributors and we manufacture LPG Truck and Transport Tanks, all types of LPG Tractor and Motor Fuel Tanks, Portable LPG Filling Stations, Trailer Tanks, LPG Storage and Domestic Tanks, Farm Carts and Anhydrous Ammonia Tanks, all built by men with years of Butane-Propane bulk plant experience. Let Nor-Tex help you boost profit and slash delivery costs with High Flow piping... faster loading and unloading units.

NORTH TEXAS

Extra Savings!
We Are Truck Distributors!

Nor-Tex
LOW COST
LPG
Financing
A PLAN TO MEET EVERY NEED

May We
Help You?

Interested attention, experienced assistance and helpful suggestions are yours for the asking.



You can now haul
MORE GAS and LESS STEEL
Than ever before!

Hitch
YOUR PROFIT
to a
STAR

Internal Relief
Valve on all
"STAR" Systems

CUSTOM BUILT

with every desired feature in an above ground tank

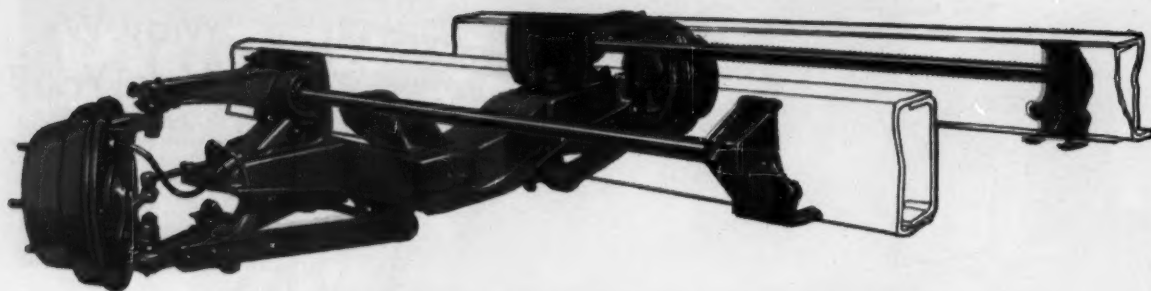
- ★ Nor-Tex construction exceeds all safety requirements.
- ★ Thoroughly buffed and cleaned for finest appearance.
- ★ The Nor-Tex STAR is completely fitted and ready for use.
- ★ Bottom outlets are standard on all above ground tanks.
- ★ Immediate delivery on one Nor-Tex STAR or a truckload.

- ★ Custom Made Hood
- ★ Rego Multi-Valve
- ★ Rego Regulators



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CHEVROLET'S REVOLUTIONARY TORSION-SPRING RIDE

the most significant new truck development in decades!

Years of intensive engineering achieved a revolutionary result—a totally new truck suspension system. The most exhaustive chassis engineering program in trucking history proved conclusively that, from the standpoints of both ride and durability, the finest possible truck suspension system would consist of independently suspended front wheels with torsion bar springing. Advancing on this principle, Chevrolet engineers proceeded through years of development to produce a completely new system for the 1960 Chevrolet truck product.

New Torsion-Spring Ride—how it works. The revolutionary result of Chevy's all-out engineering effort—Torsion-Spring Ride—eliminates both the old-fashioned I-beam front axle and friction-producing front leaf springs. Each front wheel, suspended independently of the other through tough control arms and low-friction linkage, is free to step cleanly over bumps without jarring the entire truck. Also, friction-free torsion bars on either side of the chassis, specially mounted to provide a twisting action, work to absorb each jolt; they flex freely to soak up all kinds of shocks, from the smallest to the most severe.

Three new rear suspensions, tough and tailored to the truck, are completely redesigned to complement



M70 tandem proves its stamina on year-long test of durability.

the independent front suspension in every weight class.

Here's a ride that lets you get more work done in a day's time! Take a '60 Chevrolet truck over a rough stretch of back road and feel the absence of I-beam shimmy and wheel fight. Chevy's torsion springs soak up jolts and jars that would shake the headlights off an ordinary I-beam rig. You move along with maximum payloads at higher safe cruising speeds. You make your tough off-the-highway runs in less time, improving your ton-mile-

per-hour rate as much as 100%.

A ride that shows respect for the driver and the load! Out at the GM Proving Ground, the test drivers will take a torsion-spring Chevy any day over an I-beam truck—even if they have to drive it twice as far. The ride's that much better; that much safer. The load, too, has an easier time of it. There's far less bounce and jounce, less danger of damaging fragile cargoes.

A ride that adds extra thousands of miles to the truck's working life! You can be sure the shockproof action of Chevrolet torsion-spring ride means lower maintenance costs. As much as 78% of all objectionable road shock and vibration is absorbed before it can be transmitted to the truck's body and sheet metal. Chevy trucks stay new-looking a whole lot longer and their working life is increased by extra thousands of miles.

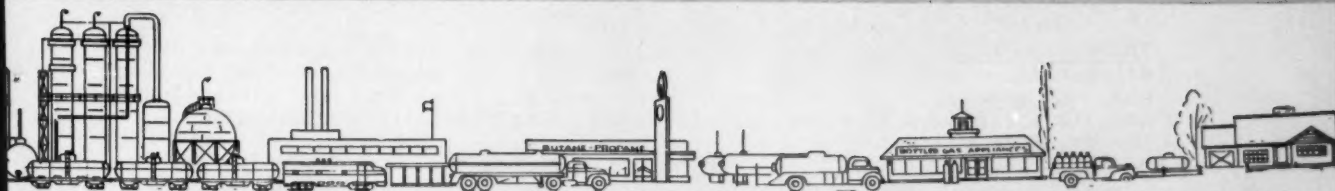
Once you've experienced the incredible smoothness of a torsion-spring ride, you'll realize that Chevrolet has set off a full-scale revolution with the introduction of its '60 models. By throwing away the old-fashioned I-beam in favor of independent front suspension, Chevy's new design has improved virtually all phases of truck performance. Drive a new one just once. That's all we ask. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

1960 CHEVROLET STURDI-BILT TRUCKS



HIGHLIGHTS

BPN



The steel strike continued to be industry's number one story--and headache-- as BPN went to press in mid-November. The nation's steel workers had started their second week of work under the 80-day Taft-Hartley injunction, but finished steel was weeks away. And over all hung the threatening shadow of a resumption of the 116-day strike--when the injunction expires January 26.

How badly was the nation feeling the strike? Worse than expected. Gross national production for the third quarter dropped to \$478.6 billion from the record second quarter rate of \$484.5 billion. Only a month before, the President's Council of Economic Advisors had predicted a smaller decline--to \$481 billion. Net result was 300,000 (excluding strikers) idled by the strike.

How were suppliers to the LPG industry faring? Surveying 75 appliance manufacturers, the bulk of that industry, the Institute of Appliance Manufacturers found that 63 would be closed by the time you read this and another three might be closed. Suppliers of LPG system components were also feeling the pinch. The "Wall Street Journal" quoted Rockwell Manufacturing Co. as saying that--while it hadn't run into any production problems yet--it was cutting down on incoming orders for valves, meters, etc. The firm reportedly would be "hard-pressed" for steel supplies by early December. Delta Tank Manufacturing Co. Inc. said it would be able to maintain operations throughout the balance of the year but on a reduced basis.

The steel shortage should continue for at least seven months. It takes about four weeks for the average steel product to complete its production cycle. Some products require six weeks. In this latter category is cold rolled steel, badly needed by both appliance and auto makers. It may well be Christmas week before full production of cold rolled is reached. All the steel produced during the injunction period will probably do no more than keep the still-open factories limping along and allow a few closed ones to open for a while. Most steel executives seem to believe that even if the strike is not resumed, it will be June or July before shipments are back to normal.

Suppliers to the LPG industry will be fighting a three-way battle of allocations during this recovery period. Appliance and component makers will have to present a strong case to the steel mills to get their share of the allocations. Then, the manufactured goods will have to be allocated to distributors, who must allocate to the LPG dealers and other retailers.

September's appliance sales figures showed measurable to sizeable increases over those of September '58, a good indication of the amount of steel stockpiled prior to the strike. Specific increases for the month were: central heating equipment, up 1.8 per cent over September '58; water heaters, up 4.3 per cent; gas ranges, up 13 per cent; and gas dryers, up 22 per cent. However, these increases are--in three of four cases--below those for the first nine months of the year. Compared to the same period of last year, the nine-month increases are: central heating equipment, 24.2 per cent; water heaters, 13.9 per cent; ranges, 12.7 per cent; and dryers, 36 per cent.

Continued on next page

Continued

HIGHLIGHTS

The nation's LPG stocks were at an all-time high as winter approached. On October 31, combined storage of L. P. gas and L. R. gas totaled 1.20 billion gal., as opposed to 907 million gal. on Oct. 31, 1958. This was accomplished despite a big summer usage increase--particularly for irrigation in the Southwestern plains states.

The Federal Trade Commission's case against the merger of Warren Petroleum Corp. and Gulf Oil Corp. went through three more rounds during October and November. Net result of the three hearings is that FTC prosecutors must (by Dec. 31) show the pertinency of their proposed economic survey of the LPG and natural gasoline industries. The case is three years old this month.

New transmission and storage facilities continue to make news. One of two pipelines planned (by Pembina Pipe Line Ltd., Calgary, Can.) to run from Calgary to Milwaukee, Wis., would carry LPG from Canadian natural gas fields. The 600,000-gal. Lake Village, Ark. barge terminal announced in August BPN will be leased by General Gas Corp. (Baton Rouge La.) from Cities Service Oil Co. (Bartlesville, Okla.), according to a late October announcement by both companies.

A step toward greater recognition in the oil industry was taken by LPG men in early November. At the annual American Petroleum Institute meeting in Chicago, the newly formed LPG Committee of the API's Division of Marketing met for the first time. Initial membership was 37, including top representatives of producers and marketers. E. H. Lyon of Phillips Petroleum was acting chairman. Purposes of the committee are: to coordinate industry members' concepts and activities in supply and distribution problems, to promote understanding of these problems, to improve operations from the public's viewpoint, and to create broader acceptance and use of LPG.

Thermoelectric power developments continue to make rapid progress. (See this month's Power Section for one.) The Air Force recently unveiled a propane-powered 100 watt generator, ten times more powerful than its predecessor. And in Dallas, the Lone Star Gas Co. has developed a gas bathroom heater that produces enough electric power to run the self-contained heater fan, increasing efficiency 25 per cent!

An LPG-vs.-oil heating comparison test recently conducted in Maryland proved that cheaper and higher-heating value oil ends up twice as expensive as LPG. The winning fuel was used in an infra-red heater.

Continuing its expansion into the LPG industry, United Gas Improvement Co., Philadelphia gas utility, in early November announced the purchase of its third LPG firm. It bought A. C. Horner Inc., which serves eastern and central Pennsylvania from plants in Harrisburg and York. William E. Horner will continue to manage the newly-acquired property for Ugit Gas Inc., LPG subsidiary of UGI.

A bit of butane recently carved a small niche in history. The ribbon-cutting ceremonies of the first Blue Star Home of the Year were given an unusual twist when Mayor Savage of Worthington, Ohio (a Columbus suburb) burned the ribbon with a butane lighter. The stunt received considerable radio, television and newspaper coverage, for this home appeared in a ten-page full-color spread in "Good Housekeeping."

Season's Greetings! The entire BPN staff wishes you the merriest of Christmases and the happiest of New Years!

*Versatility
in
design*



BASO[®] pilot burners for all types of appliances...any fuel gas

Baso pilot burners are versatile in design... readily adaptable to all kinds of gas appliances and any kind of fuel gas... easy to install... engineered to meet product requirements. No matter what size and type of main burner—inshot, star, drilled port, ribbon burners (single, sectional or multiple)—there's a Baso pilot burner available for each design.

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NEPTUNE LP-

Complete Truck Metering System in One Space- Saving Unit

Nothing extra to buy... only 3 connections to make

To measure liquid LP-gas accurately and safely under all conditions, you not only need a meter, you also need *six* different accessories: vapor release, strainer, pressure relief valve, inlet check valve, differential valve, and vent line check valve.

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What's more, Neptune's unique design of vapor eliminator and differential valve positively prevents metering of vapor in the system under *all* conditions. Always easy on your pumps. Never needs adjusting from hot weather to cold. Backed by nation-wide network of Neptune-operated service centers.

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VENT LINE CHECK

VALVE: Permits cleaning strainer or opening meter without depressurizing supply tank. No need to shut off valve in vent line.

PRESSURE RELIEF:

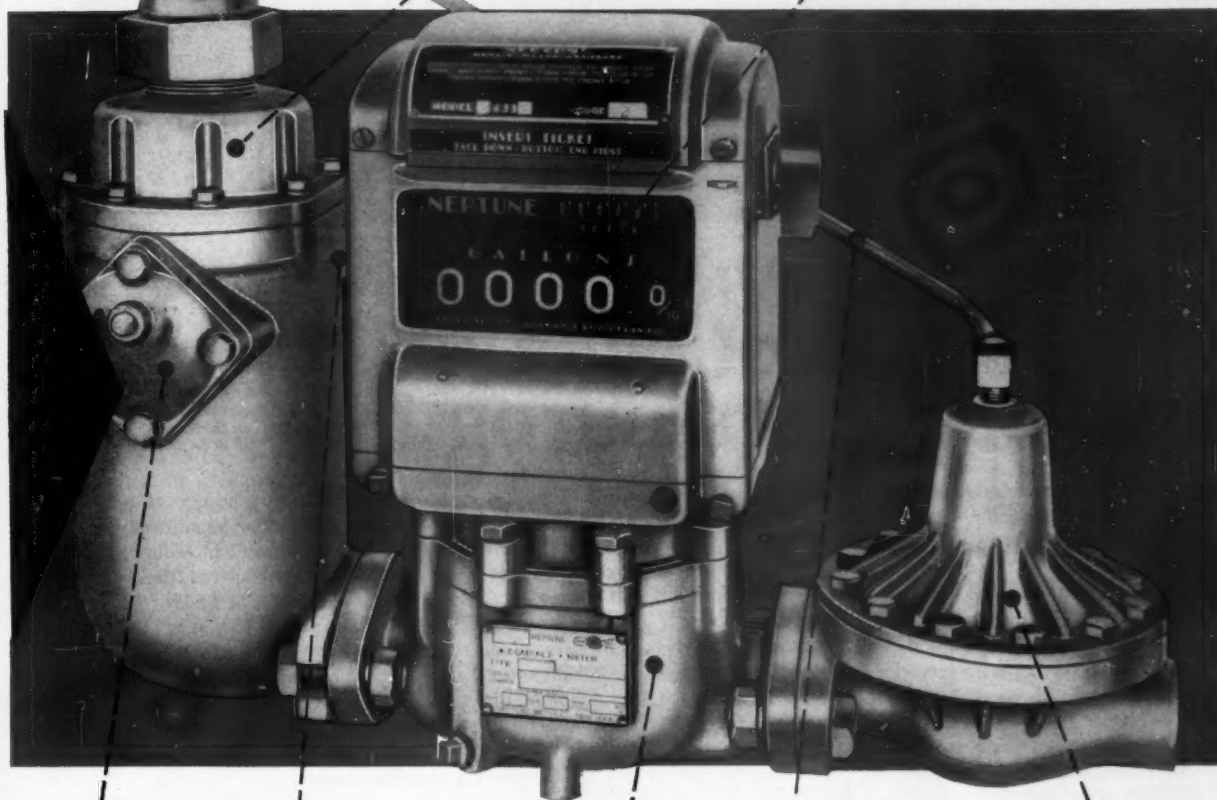
Actuates at 250 psi. to prevent damage to meter or installation in case of overpressure. Vents back to supply.

VAPOR RELEASE:

Releases air and vapor from liquid before it enters measuring chamber, insuring accuracy. Excellent capacity. High-pressure float. Vapor is vented back to the supply.

REGISTER:

Direct Reading or Print-O-Meter type. Easy to operate and read. Print-O-Meter delivers the meter-printed tickets your customers like so well.



STRAINER: Removes sediment and dirt from liquid, preventing undue wear or damage to meter.

INLET CHECK VALVE:

At rear. Prevents backflow of LP-Gas when pump is stopped.

MEASURING CHAMBER:

Positive displacement type. Only one moving element. Measures liquid by volume. Widely popular for sustained accuracy and long life.

VAPOR CONNECTING TUBE:

Equalizes pressure between top of differential valve and supply tank.

DIFFERENTIAL VALVE:

Maintains product in liquid form in meter, and prevents formation of vapor. Low pressure-differential is easy on pumps. Negligible friction loss.



CITIES SERVICE ANNOUNCES NEW BRANDED DISTRIBUTOR PROGRAM

Recent years have seen Cities Service develop a super-accelerated expansion program in LP-Gas. Storage facilities have grown so they can now handle over 100 million gallons of LP-Gas . . . a vast transportation network of pipelines, tank cars and motor transports has been improved to handle distributors' orders efficiently and with increased speed. Each addition . . . each improvement has been made the better to serve LP-Gas distributors and their customers.

AND NOW, the newest addition to the Cities Service LP-Gas program . . . a new LP-Gas Distributor Program with complete 50/50 advertising support. Cities Service

will now share the cost of promoting your business as a branded distributor in all authorized media. A complete package of exciting new material is available including: Free Newspaper Mats . . . Professionally Prepared Radio Commercials . . . Road Signs . . . Free Color Slides for Theatres . . . Truck and Store Decals . . . Novelties . . . Uniforms . . . and many, many other items.

Call or write the nearest Cities Service office listed below for the new brochure "A New Sign for LP-Gas Distributors." This 28 page free booklet will explain the full program with illustrations of the material available to Cities Service branded distributors.

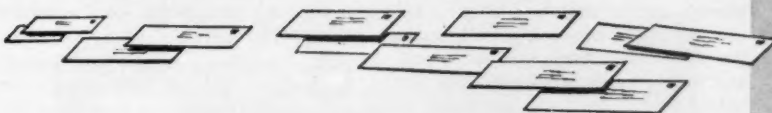


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**BPN**

Letters

Think before changing compression ratios

North Carolina

We have been installing L. P. gas carburetors for some time and have had very good results. We have read many articles about the advantages of raising the compression ratio and in most cases we have done this, along with making the manifold cold, using colder spark plugs, etc.

We realize the newer cars and trucks come with higher compression ratios. For trucks with compression ratios of around 7.5:1 to 8.00:1, is there any advantage in raising the ratios? Is there a rule of thumb for determining when to raise compression ratios?

D. J. L.

The newer car and truck engines with 7.5 and 8.0 to 1 compression ratios have extremely close clearances. They are in some cases at a critical state and changing them may do harm, rather than improve efficiency and operation. We believe it is better to leave the compression ratio as it is, and improve the operation and efficiency with cold manifolds, proper timing, correct spark plugs, and properly maintained ignition systems.

There is no rule of thumb for determining when a compression ratio can be raised. Each make and model of engine must be checked. Designs vary and clearances, valve operation, and other items of design may be affected in a manner which will cause trouble with the engine operation and performance.—Ed.

Causes of sticky valves

Mexico

We have been in the butane business for the last 14 years. We operate a fleet of 140 units, all fueled with LPG. Besides, we supply many stationary engines used in irrigation. All through these many years we have had valve and hydraulic lifters trouble.

What kind of motor oil should we use? What special characteristics must the oil have in order to reduce trouble to a minimum?

F. R. D.

It is difficult to trouble-shoot by long distance communication. Generally, the cause of sticky valves is gum or varnish formation.

These formations when they do occur, may be made worse by a number of things besides oil. Lean carburetion, improper ignition, timing, setting valve tappet clearances too close, using crank case oil too long without draining, lugging the engine down too much of the time or over loading may be factors leading to your trouble.

The type and weight of oil used may depend on the engine construction and the service it has to perform. Therefore, the engine manufacturer and the oil supplier should be consulted for their recommendation.

It is generally conceded that lighter weight oils should be used in L. P. gas engines than in gasoline-fueled engines. The oil in the L. P. gas engine tends to become heavier as it is used because there is no dilution from gasoline.

Some engine manufacturers want detergent oils used, while others do not think they are necessary.—Ed.

Customer's solution wrong

Illinois

We have a customer who has a 100,000 Btu forced air furnace, with a 5 in. vent; and a 30,000 Btu water heater, with a 3 in. vent connected to a 9 x 13 brick chimney. His house has a heat loss of 72,000 Btu and we had a 5075 degree-day winter. From July 20, 1958, to July 20, 1959, he used 1450 gal. propane in both appliances. Our gas sells for 14.4 cents per gal.

He complained about a hot chimney, as hot as with coal, and high fuel bills. Says too much heat is going out the chimney.

So he sealed the chimney top with a concrete slab and has one

2½ x 4 in. opening in each of the four sides with a 45 deg. baffle over it (See sketch). The total opening in the chimney is 36 sq in. Required is 27 in. However, the chimney is now about 3 ft below the peak of the roof and I think it is possible for a diagonal wind to totally block off half the opening. I do not like the risk involved so will you please give me your opinion?

B. I.

The amount of fuel consumed does not seem excessive for a house that has the heat loss rate you mention in your letter, with a heating season of 5075 degree days.

Have the proper draft hoods (furnished with appliances) been installed on the water heater and furnace? If these have not been installed, it could cause excessive heat loss as well as other undesirable and unsafe reactions. The water heater and furnace are designed to work efficiently and correctly with the draft hood in place. AGA approved appliances must meet certain efficiency tests and among these is a requirement for flue temperatures.

"The temperature shall be taken in a plane perpendicular to the axis of the flue immediately before the inlet of the draft hood. The temperature of the gases as they leave the furnace and enter the draft hood at this location shall not exceed an average of 480°F above room temperature." The average referred to is the average of temperature taken at several points in a plane across the flue.

The furnace is not dependent upon the chimney draft for its proper operation. It discharges the products of combustion into the draft hood from which these products, together with air, are carried out through the vent.

A gas heating appliance should not be vented directly into a masonry chimney. Gas burning appliances work efficiently, and the products of combustion are not very hot as they leave the appliance. Water vapor condenses on the cold masonry of the chimney, and also the products are cooled down by the cold chimney walls

until no draft is provided. A lined masonry chimney gives no better service to the appliance, but the lining may keep the moisture from passing through the brick wall and causing damage.

A gas fired heating appliance should always be vented through an approved type B vent of proper size for the appliance. The appliance should always be provided with a draft hood of approved design and size for the appliance. It should be a part of the appliance or a part of the vent or vent connector from a

gas appliance and located at the outlet of the appliance.

Approved type B vents can be placed inside masonry chimneys to provide proper and safe venting for gas heating appliances, providing the flue is not otherwise used as a passageway. An insulated vent like this within the chimney will act as an independent vent, separate and apart from the chimney itself. The vent gasses will then float up and out safely, for the insulated vent keeps them warm.

Leaving the chimney flue open at

the top, and removing the clean-out door at the bottom, provides an open circuit of free-flowing air which will move through the masonry flue around the vent to dry out a moisture soaked chimney.

The following steps are recommended by William Wallace Co. in their Vent Installation Handbook for using a masonry chimney as a passageway for a vent:

1. Inspect the chimney for offsets or obstructions in the flue.

2. Clean the chimney, removing soot, debris, and projecting pieces of mortar.

3. Remove the clean-out door or make a permanent opening by removing a few bricks at base of flue.

4. Determine the proper size of vent for the appliance or appliances to be connected.

5. Make an opening near base of chimney, but as high as possible to allow for maximum vertical rise from the appliance. Leave room for at least 1 in. clearance between vent connector and combustibles.

6. Drive a steel rod into a mortar joint of the chimney at the base of the opening, so the rod extends across the opening from front to back.

7. Level the steel rod and support it with a piece of wood.

8. Fit a tee cap tightly into the base of tee; set tee on steel rod inside the chimney.

9. Lower lengths of vent down the chimney after securely fastening each joint with a minimum of three screws. Join lower end of vent with top of tee at knockout opening. Then fasten vent and tie securely with two or three screws.

10. Center tee and vent on steel rod at bottom; center vent at top with a spacer ring.

11. Attach an approved top to top of vent.

12. Clean out refuse and soot which may have fallen into base of chimney during the installation. Remove through clean-out door.

13. Attach straight stub length to horizontal opening of tee to extend tee beyond chimney face. Fasten stub to tee with three screws.

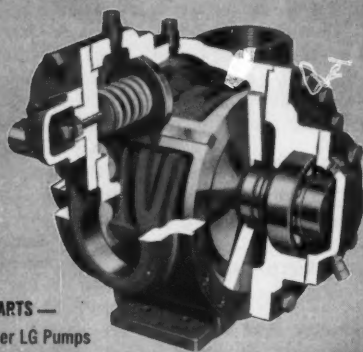
14. Close break-out opening by replacing brick, but leave clean-out door off.

15. Complete installation by extending vent connector from chimney liner to draft hood.

I do not think the cap on the chimney, as you described it is safe. Secondly, we recommend the class "B" vent inside the chimney with a down draft diverter on top of it.—Ed.

HOW MUCH WILL IT PUMP? HOW LONG WILL IT LAST?

Pumping speed is part of the answer to profit in the LPG business, and Blackmer-type LG Pumps give you dependable flow rates from 10 to 150 gallons per minute. But, the right answer to the second question can make the real profit difference! Blackmer LG Pumps, with vanes that are self-adjusting for wear, replaceable cylinder liners, cartridge-type mechanical seals and ball bearings, make it easy and inexpensive to keep pumps at peak performance year-in and year-out with very low maintenance costs. Learn more about Blackmer LG Pumps for top profit in every phase of the liquefied gas business. SEE YOUR BLACKMER DISTRIBUTOR SOON.



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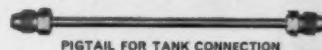
Now, merely by specifying one Outfit Number, you get the complete RegO Two-Stage Regulator Outfit you need—pigtail for connecting to service valve; first-stage Red Giant regulator for delivery pressures of 1-5 psi, 5-10 psi, or 10-15 psi; and the famous RegO second-stage regulator delivering uniform flow at 11" W.C. . . all for loads up to 625,000 btu (250 cfh) or 1,250,000 btu (500 cfh).

Options include: pressure gauge on first-stage regulator, mounting bracket for second-stage regulator, and a suppressor assembly that eliminates pressure pulsations caused by the impedance of vent piping when second-stage regulator is installed inside a building. Just one number specifies everything—saves your time in selection and ordering . . . assures over-all balanced components.

WRITE FOR THIS HELPFUL NEW FOLDER

New RegO Folder L-417 explains when and how to install two-stage regulation . . . the resulting economies, including minimizing of freeze-ups . . . the importance of suppressors for pressure uniformity and safety protection . . . simplified RegO "package" numbering.

Also included are charts showing recommended line sizes between first- and second-stage regulators as well as between second-stage regulators and appliances, a typical installation diagram, and a table of minimum distances governing location of stationary tanks with respect to buildings. Nowhere else will you find all this information so convenient for instant reference. Write today!



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WASHINGTON REPORT

by NEIL REGEIMBAL, Washington Editor



**Near future
financial forecast:
higher interest,
tighter money**

- ★ INTEREST RATES ARE GOING HIGHER AND MONEY WILL GET TIGHTER before the situation eases, top government monetary experts warn. They say government interest rate payments may go as much as one percentage point above the present record high. The situation is complicated by the lengthy steel strike and the probability of six months or more of shortages after it's settled. The problem has revived demands in congress for giving the government power to control money and credit.

**Housing boom
slowing,
but still healthy**

- ★ TIGHT MONEY AND HIGH INTEREST RATES may be taking some of the steam out of the housing boom. The government reports that housing starts dropped to 120,000 units in September. This was the same as the all-time high for the month hit last year; but it was a drop from August, and August dropped from July. These drops are too small yet to blunt the optimistic forecasts of a near-record housing year this year. But they could slow construction by early next year. Through the first nine months of this year, home building averaged at an annual rate of 1.37 million units, about 300,000 more than last year.

**New federal wage law
possible in '60**

- ★ A NEW FEDERAL WAGE LAW, boosting hourly rates and bringing many stores and service firms under federal regulation, is a distinct possibility for 1960. There is plenty of political pressure for such a law from both parties.

**Self-employed
retirement funds
awaiting Senate action**

- ★ THE HOUSE-APPROVED PLAN to permit self-employed persons to set aside tax-free sums for retirement is now awaiting debate and vote in the Senate. Under the bill, self-employed persons could defer until age 70 the federal income taxes on as much as 10 per cent of their income, up to \$2500 a year or \$50,000 in total.

**TVA plans to
almost double
present capacity**

- ★ TENNESSEE VALLEY POWER EXECUTIVES aren't wasting any time in using their new bond authority to finance a massive expansion. The ink was barely dry on the new law permitting TVA to have up to \$750 million outstanding before ambitious plans to almost double present load capacity were announced. It claims the expansion is needed to head off potential power shortages caused by rapid industrial growth. The system now can generate 11.4 million kw.

**One tax regulation
tightened for co-ops**

- ★ FEDERAL TAX OFFICIALS have made one move to tighten co-op regulations. In the future, the relatively few co-ops not entitled to tax exemption (because they pay stock dividends) will have to set any patronage refunds before income tax returns are filed each year. Exempt co-ops, which constitute the vast majority, have 8½ months to allocate patronage dividends.

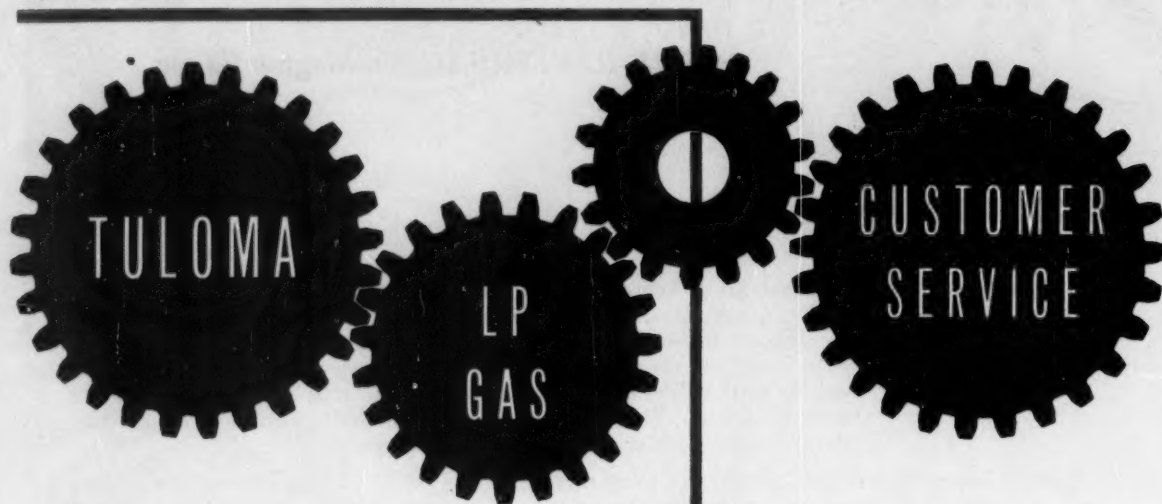
**NREA fears
Ike's co-op proposals**

- ★ NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION OFFICIALS are showing increasing fear that President Eisenhower's proposals to cut the government subsidy to co-ops may succeed next year. They're stepping up attacks on the proposals, which would boost the present 2 per cent maximum interest and require them to get some private loans. An NREA official recently claimed that 166 of the 958 REA power co-ops would be forced out of business by the President's proposals.

**Farm Federation for
single co-op tax**

- ★ THE POWERFUL AMERICAN FARM BUREAU FEDERATION, representing three-fourths of the nation's farmers, is supporting a firm single tax on farm cooperatives. The Bureau, in its latest policy declaration, favors taxing dividends returned to patrons in cash or redeemable certificates, and taxing earnings retained by the co-ops at the normal corporate rate.

THE SHIFT IS TO...

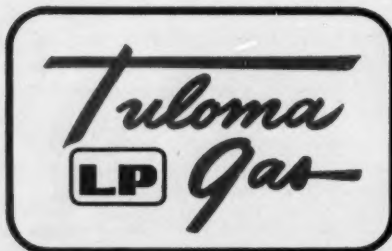


More and more growing distributors and dealers across the nation are contracting with Tuloma for better LP-Gas service. Here's why:

- Tuloma has production from more than 50 plants and refineries
- Tuloma has strategically located storage — both underground and aboveground facilities
- Tuloma has large, modern tank car and truck fleets to assure you dependable, on-time delivery
- Tuloma has experienced service personnel who are able to help you with your LP-Gas problems

For a supplier that will help you grow—

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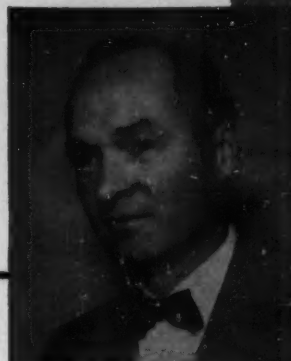


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Beyond the Mains

With WILLIAM W. CLARK • Editor



Some thoughts on price cutting

IN AN INTERVIEW WITH A DEALER, we'd manipulated the conversation around to the matter of price-cutting. We almost always do at some point. It's one of the industry's major headaches. The question keeps gnawing away: "Does someone have the answer?"

The biggest and the best ones do have an answer—of a sort. They fight fire with fire, but only selectively. For every one of my customers you swipe, I'll swipe one of yours. Pretty soon you'll see how futile this is, and call it off.

This method is not 100 per cent satisfactory. As with any backfire, it's potentially dangerous. It can easily get out of control.

In this particular dealer's area, it's difficult to be truly selective. It's a small area, fairly compact, and most of the loads are domestic. A backfire cannot be contained. If you cut price for a few, you must do it for all. Before you know it, you are drawn into a full-scale price war.

It happens too often here. There are four dealers. All are well established and make at least a reasonable profit. But every once in a while one of them will hit a slump and start getting itchy. He cuts price. Immediately it's a signal for the other three to start matching those cuts, penny for penny. Eventually the first one throws in the towel, but by that time everyone has been hurt.

Fortunately, everyone is slowly getting wiser. That sort of thing happens less often now than it once did. But there's another element in the situation that occasionally gives all four dealers fits: the newcomer who tries to break into the market by chopping off segments of every established dealer's clientele. So, here they all go again.

"Sounds like you're on a treadmill," we observed. "Isn't there room for anybody to expand without clipping his brother dealer? Isn't there room for a new dealer in town?"

"No," was his reply. "The town won't support any more."

"You mean among the four of you, you have 100 per cent saturation?"

"Oh, no," he said. "Far from it. I mean electricity and oil have all the rest."

* * *

WE PRODDED ANOTHER DEALER on this matter of price cutting. He doesn't do it, he says (that's what they all say; or if they do, they only do it defensively).

"Why cut price?" he asked. "What does it accomplish?"

He got no argument on that one. But then he said:

"Now take the gasoline business. Price wars can stimulate business. People drive more when they can save a few pennies on every gallon. They'll keep filling the tank to take advantage of the price break as long as it lasts.

"Or consider discount operations in hard goods and price cutting on new cars. These stimulate sales. People will trade in their old cars a little sooner, or junk their TV sets a little earlier to take advantage of a 'special price.'

"But what can a customer do with a tankful of LPG? He can't trade it in. He's not going to cook more or heat more water. So all you'll do in a price war is give away your profit. You won't stimulate usage by so much as a gallon of gas."

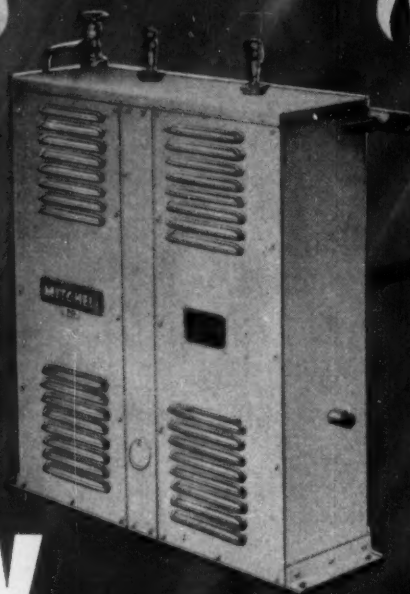
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HIS ARGUMENT SOUNDED REASONABLE, so we tried it out on another dealer. He hadn't looked at it that way before, but he had to concede that it sounded logical to him. After some musing, he offered another angle:

"Suppose I open a new market or a drugstore. If the population is more or less static, where will my business come from? Everyone already eats, and everyone uses medicines. I can't very well go out and create a new market. I've got to carve out a piece of the existing market for myself.

"But in our business it's different. When you consider how many uses there are for the product, you realize that the surface has only been scratched. We can continue to create markets for a long time to come."

STEADY PRESSURE



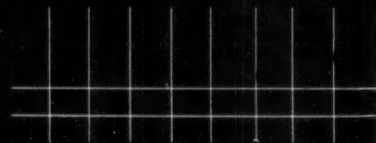
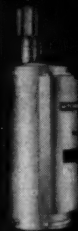
THE MITCHELL VAPORIZER

For steady, constant pressure vaporization, Mitchell's new vaporizer is the only one that can be used with overhead tanks and low-pressure gas lines.

What's more, if an LP gas line should leak or explode, you can shut down with a Mitchell Shut-Off Valve. These valves are used with other valves around the gas line. The shut-off valve may be installed in a gas line or in a gas line tank to shut off gas flow. It is also used for other control installations.

The new Mitchell vaporizer system automatically controls the rate of vaporization to the rate of usage. It also has a pressure-reducing valve to control gas pressure for use at the time of use. Sample, positive shut-off valves are also available for use in other control installations.

JOHN E. MITCHELL COMPANY



HOW do the TOP SALESMEN

SELL?

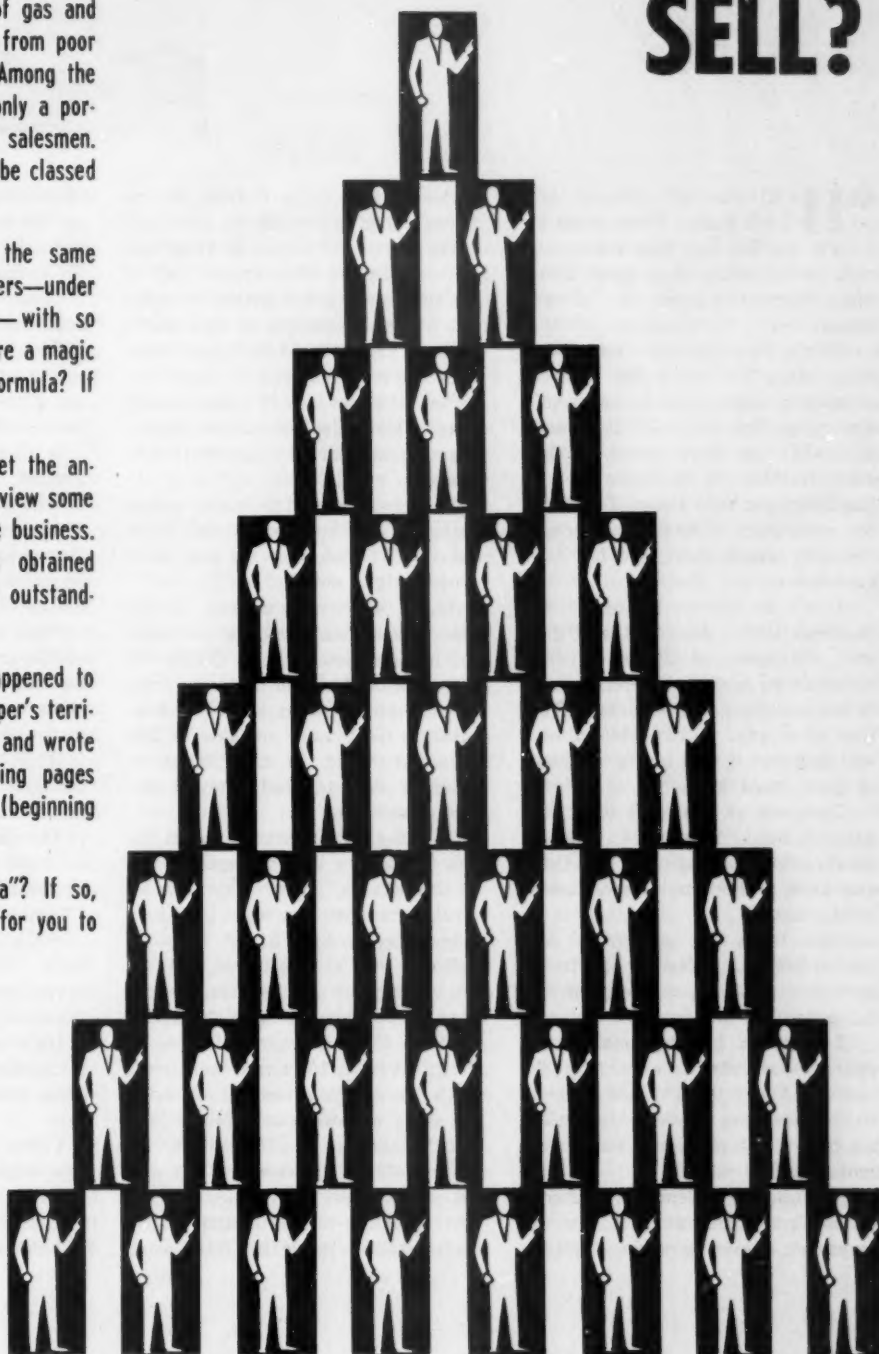
In our business, as in any other, dealers as merchandisers of gas and appliances run the gamut from poor to fair to good to great. Among the great mass of marketers, only a portion can be rated as real salesmen. Only a relatively few could be classed as tops.

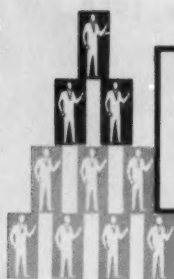
How can these few sell the same goods as their fellow dealers—under similar market conditions—with so much more success? Is there a magic ingredient in their sales formula? If so, what is it?

The most logical way to get the answer appears to be to interview some of the top salesmen in the business. From various sources we obtained informal "nominations" for outstanding merchandisers.

By chance four of them happened to be in Eastern Editor Bill Harper's territory. Bill interviewed them and wrote the stories on the following pages and in the Power Section (beginning on page 86).

Is there a "magic formula"? If so, what is it? We leave that for you to decide.





HOW

does FELIX DODD



"HARD work!" That's how LPG dealer Felix Dodd accounts for the fact that his firm is able to sell more than three times the "normal" number of gas ranges.

BPN's First Annual Dealer survey (May, '59) indicated that the composite dealer each year sells one range for every 33 customers. For the last four years, Dodd's Emporia Gas Co. in Emporia, Va., has averaged one range for every ten customers. The exact averages are 126 ranges per year for 1271 customers.

"Don't let anyone kid you," emphasizes Dodd, president and general manager of Emporia Gas. "There's no easy way. Some people think you have to be lucky. Well, they're wrong. A little bit of luck will help but it won't take the place of good, hard work."

There are at least two other reasons behind Emporia's success: good employer-employee relations and even better employee-customer relations.

Dodd takes his employees into his confidence. A feeling of what's-good-for-the-company-is-good-for-me prevails.

"I think a healthy business is employee-operated," says this 42-year-old Virginian. "What happens to the business if something takes me out of the picture? There's no indispensable man."

Individual problems are shared by all in the company. If, for example, an employee needs hospitali-

zation, Dodd pays for it. If he needs a day or two off, he gets it.

On the other hand, if there's a problem facing the company, all of its employees get together to solve it. The best example of this harks back to 1955. Dodd had just taken over the company and it was foundering due to a lack of concentrated effort. He called all the employees together and left the decision up to them.

"Are we going to make something of this business or not?" he asked. "If not, say so and we'll drop it right now."

They have, of course, really "made something" of the business.

Emporia Gas is near the North Carolina border, and a visitor finds himself engulfed in Southern hospitality. Customers are able to feel right at home. If they want to drop in just to chat, they're entirely welcome.

"Buying an appliance may be the last thing on a person's mind when he walks in here," says Dodd. "But, when he does want one, he's going to come back here."

Dodd, who also operates a Western Auto Store in Emporia, bought the then-bankrupt gas company with its 536 customers in 1954. In that first year, 13 ranges were sold.

The second year started off much the same way with only four range sales made by the beginning of March. That was when Dodd and his employees got together for their decision on the future of the company. To prove his hard-work

theory to his salesmen, he went out on the truck with them and showed them how to sell. The result was 37 ranges sold in the next three months. A total of 85 ranges was sold that year.

The next year range sales went up to a record 187 units, a figure not quite reached in 1957, when 165 were sold.

A decrease in 1958 sales, to 66 ranges, is actually further proof of the success of Dodd's methods. The only reason sales dropped last year was that he had to cut back on sales efforts in order to re-build his capital.

"Not once last year did we go out of the store to make a range sale," he states. "Every one of those sales was the result of our efforts in the three previous years."

What about this hard-work theory? How does it work? Knocking on doors and ringing doorbells is the backbone of it.

"Just start me down any street you want to name," he boasts, "and I'll make a sale. Somebody there needs a gas range. It may not be today, this week, next week, or even next month. But it will come eventually."

He's willing to bet on it. He estimates that one of every five doors knocked on will result in a sale.

There's no such thing as nine-to-five working hours, either.

"The 5 P.M. to 8 P.M. hours are the best for working," he continues. "That's when both the wife and

sell three times

the "normal" number of ranges?

husband are home together and you've got to sell them both."

During a sales campaign, Dodd spends the afternoon talking with housewives in house-to-house canvassing. The better prospects are paid a return visit that evening. He finds that when talking with a married couple, he will usually have one of them on his side. One really wants a new range. Then, with that two-to-one advantage, he helps the wife overcome the husband's sales resistance, or vice versa.

After the range has been installed, an Emporia representative is sure to call back in about 10 days.

"By that time," Dodd reveals, "the customer's mother, sisters, relatives, neighbors, and friends have been in to see the new range. They've all been impressed by it and they start thinking that maybe they need one themselves. On 50 per cent of these callbacks we get at least one new hot prospect."

With the same idea in mind, Dodd likes to deliver a range at a time when most people are apt to see it. This is a form of advertising and it works. Once Dodd stopped his truck on the way to deliver a range and asked a passerby for directions. Before he had finished getting the directions, his informant had purchased a range right off the truck!

Don't get the idea, however, that Emporia Gas sells its ranges indiscriminately. Dodd does not want one range here, another one 10 miles away, and still another 15

miles away from that. This kind of selling presents a gas delivery problem. So, he tries to sell in one concentrated area at a time. If he does make an isolated sale, he concentrates on selling 15 or 20 more ranges around that one.

Emporia Gas also does its own financing. This has both advantages and disadvantages. In the first place, it is a money-making proposition. Dodd levies a 16 per cent finance charge on customers who buy on a two-year plan and 12 per cent on those with one-year plans. This, he feels, is competitive with other businesses in the area. Yet, in one year, he made a profit of \$2663 on financing.

"We can't lose money selling ranges," says Dodd emphatically. "The average cost of the range we sell is \$250 retail. Considering that we have a markup of about 50 per cent, we get our investment back in about a year with a \$10-down-and-\$10-per-month purchase plan. Then it's practically all profit."

Dodd reports that he has to repossess only about five per cent of the ranges. To people he considers good risks, he will put in a range without a down payment. But, if the customer promises to pay some money within a specified period and does not, Dodd has the range pulled out immediately.

"We get them in and out in a hurry," is the way he puts it. "We don't fool around with people who won't pay."

The biggest disadvantage of do-

ing his own financing is that Dodd sometimes has to limit expansion, due to a lack of capital. This is what happened in 1958. After three years of concentrated selling efforts, he suddenly found himself without the necessary funds to keep up his inventory. So, he had to cut back on his sales efforts. Now, as the profits on those previous sales are starting to mount (\$2400 income per month from contracts in 1958), Emporia Gas is again building an inventory of ranges.

Dodd says he will not go to the banks to borrow money for capitalization.

"I want to keep my independence at all costs," he explains. "I'm willing to pass up a lot of profits today to make a stable organization for tomorrow."

To help get his sales ideas over to his salesmen (a misnomer, for all are combination men), Dodd conducts weekly one-hour sessions. He uses the men's own personal sales records to show and compare their progress. The mistakes made by individuals are used as examples. As a matter of fact, Dodd encourages his men to go out and make mistakes. He feels that's a good way to learn, but he cautions them not to make the same mistake twice. Basically, just about everything he does is on a trial-and-error basis: if it works, fine; if not, try to find a way to make it work.

At the sales meetings, he also tries to impress that Emporia Gas is in the public service business;



Felix Dodd goes over the sales records with one of his men, a monthly routine that ascertains whether each employee is earning his keep.

that the customers actually pay the salesmen's salaries.

Working from his own experience—with Western Auto and, prior to that, with Carolina Power & Light Co. and General Motors Acceptance Corp.—he shows his men how to open a sale and how to close one. Speaking of the latter, he believes that "sometimes it's just as simple as taking out the contract and handing it and a pen to the customer."

Every meeting, he stresses that service makes sales and is "the backbone of the business."

The art of making collections is another item he covers. He tries to get his men to overcome their natural reluctance to asking customers for money. They must know how to collect as well as sell.

And, each employee is urged to end each day by compiling a list entitled "Things I Must Do Tomorrow."

Another topic always discussed is the customer who just will not buy. The men offer suggestions or experiences of their own to help close these sales. Sometimes, when Dodd is making a sale in the store, he will (unknown to the customer) tape record the conversation. He uses these tapes at the meetings to

show what went right—or wrong—with the sale. His primary purpose is to get the salesmen to answer the question: If you were the customer, what would you want the salesmen to do for you?

He uses his customers in other ways to help him train his salesmen. For example, Dodd is almost delighted when a customer vents his anger on the salesman responsible for a faulty installation. He wants the customer to demand that the salesman remove the installation and do it all over. That, he feels, is the best way for them to learn to do things right the first time, since Emporia Gas does not pay overtime.

Getting, training, and keeping good personnel is Dodd's biggest problem. His initial requirements for men cover only two things: that they read *Reader's Digest* and that they go to Sunday School.

"Teaching salesmen," he says, "is a lot like teaching children. You've got to be patient with both. It's all up to the individual. One man can be in the operation for only three months and you can teach him to sell. Some never learn. But what's even worse is a man who can sell and won't because he's too lazy. You've got to get that certain

'something' out of each man. I don't know what it is. Age isn't the answer. Education doesn't make a difference either. Once we had a fellow whose teeth were bad. He was self-conscious about it. So, I told him to get his teeth fixed. After he did, he became one of the best."

An employee starts working at Emporia for \$50 per week. This is consistent with other companies in the area. After six months, his pay is boosted to \$60. He also gets 5 per cent commission on appliance sales, and a flat \$5 for gas ranges sold.

Dodd explains the latter rate by saying: "I don't think they should get any more considering the time and money I'm investing in training them."

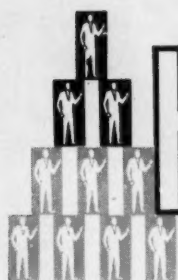
Within two years though, an employee usually gets the full commission plus annual base salary increases.

Because each man is a combination man, Dodd has devised the work list below to show how much each job done by an employee is worth to the company. All employees are expected to do any combination of these jobs that will total at least the basic \$50 weekly salary he pays them. The figures in parenthesis are the company's monthly totals.

Appliance delivered (100)...	\$ 2.00
Cylinders delivered (400)...	.50
Installation made (20).....	10.00
Range sold (10)	20.00
Collections (\$2000)	10%
Trip to Rocky Mount for gas	6.00
Miscellaneous sales (\$2000) .	5%
Hour's work on sales floor...	1.00
Checking out range (100)...	2.00
Picking up discontinued customer (200)	1.00

Every month, Dodd goes over his books with each man to determine how well the individual earned his keep.

Have Dodd's hard-work methods been successful? Emporia Gas Co. will soon start construction on a \$75,000 building, made necessary by rapid expansion of the business. And, Dodd doesn't have to work quite as hard these days. If you want to talk to him, your best bet is somewhere out on the country club golf course! ■



HOW

does JESSE BARFIELD



sell 600 space heaters a year without outside salesmen?

NEWSPAPERS and radio! They're the real salesmen for Tri-County Gas Co., headquartered in Tifton, Ga. General Manager Jesse Barfield relies heavily on advertising in these two mass means of communication and feels he doesn't need outside salesmen to sell his appliances.

And he appears to be right, too. His company has boosted its sales by nearly 50 per cent. And with Tri-County's volume, that means 1 million gal. Much of this increase can be attributed to the fact that last year the firm sold 600 complete space heating systems. Translated into load, those 600 sales add more than $\frac{1}{3}$ million gal.

While it's nice to go on quoting figures such as a 300 per cent sales increase for one brand of heater in a three-year period, the question has to come up: "Why no outside salesmen?"

The company covers about 2500

sq miles of south Georgia. In that area are 80,000 people, or about 32 people per sq mile.

"I don't feel that it's worthwhile to send a salesman chasing around the countryside in an automobile, trying to bring in blind leads from such an area," Barfield explains.

He lets the newspapers and radio stations do his chasing for him. The company has five offices in Georgia, located in Tifton, Adel, Nashville, Ocilla and Sylvester. The combined circulation for the newspapers serving these cities is 16,057. Tifton has two radio stations and Adel has one. Between them, they reach some 38,000 listeners. Barfield is certain that this is the way to reach his customers and potential customers. He quotes a very impressive figure to back himself up.

"I'd say that 90 per cent of our total sales are made right off the floor to people who come into our

"Working together has been, in a measure, responsible for the success of our company," declares Jesse Barfield. In fact (see above), the employees even play together, and look at the results!

offices. The customer who comes to us is the best kind. I feel that this kind of advertising suits us best to do this job. I try to keep the company's name before the public constantly."

To do this, Tri-County spends \$15,000 per year, roughly 2 per cent of its total gross income. The biggest slice of this is spent on radio. On one Tifton station, Tri-County sponsors two daily programs, one for 15 minutes and one for five minutes. On the other Tifton station a five-minute news broadcast carries Tri-County's name to its listeners ten times a day. In Adel, a weekly quarter-

TRI-COUNTY GAS CO.

GREEN'S FUEL DEALERS

OFFICE TIFTON AD OCILLA



Tri-County's heavy newspaper and radio advertising schedule is backed by such "gimmicks" as this full range of products display at the Tift County Fair in Tifton.

hour program is sponsored by Tri-County, along with numerous 30-second "spot" commercials.

The five newspapers serving the area carry their share of the advertising load also, but Barfield prefers to use them most for seasonal promotions. For example, in the early fall when he puts on his annual house heating drive, he depends upon the papers to bring the public into the stores. Another way in which he uses the papers is by supplying publicity stories on the company's operations. An example of this was a recent story in one of the Tifton papers on the company's installation of a two-way radio hookup.

The bulk of Tri-County's advertising extolls the advantages of liquefied petroleum gas over other fuel and power sources.

"Our chief competition," asserts Barfield, "are the rural co-ops and Georgia Power Co. We try to tell the people of the cleanliness, the diversity, and the availability of L. P. gas. We're not worried about competing against other bottled gas dealers in our area. Actually, we're all working together to improve our entire industry. I'm trying to get the people to buy gas so they can see for themselves the advantages of

gas over other types of fuel."

Space heaters account for 60 per cent of Tri-County's appliance sales. Barfield feels heaters provide him one of his biggest margins on competing fuels. Through radio and newspaper advertising, he tries to make the customers aware of the gas-fired space heater's advantages: economy of operation, instant heating, low cost of replacement parts (as compared to electrical parts), round-the-clock availability of a service man, and durability of the appliance.

Space heating equipment sales account for about 75 per cent of the profits derived from the company's gas load building. Barfield figures that a space heater gives him a permanent customer. This is his "in." Once a space heater has been installed, the company follows up by trying to sell the customer a range, a water heater, or some other appliance.

"We don't have real hard weather in our area of Georgia," says Barfield, "but it isn't Florida weather either. Most of our space heater sales are made in old homes. Yet, 80 per cent of the new homes being constructed in our area have gas heat."

Tri-County also tries to use the

sale of space heaters to increase its off-peak load. This is done by trying to induce the customer to buy the largest storage tank possible. The average size is a 250-gal. tank, although some 1000-gal. tanks are sold. The larger tanks (Barfield doesn't bother much with cylinders) enable the company to spend a big portion of the summer months filling for the winter. The company tries to put its customers on a 1½-1 ratio. Its average space heating customer uses about 600 gal. per year.

To encourage large tanks, Tri-County offers a fuel discount. When a customer buys a 1000-gal. tank, he gets 3 cents off per gal., as compared to the 250-gal. tank user. A 500-gal.-tank user gets 2 cents off.

The company also uses discounts to encourage cash purchases of space heaters and other appliances. Starting in late September—when for two months space heater sales are highest for Tri-County—the company offers a 10 per cent discount on any appliance bought for cash.

October is the peak month for space heating sales, Barfield finds. Last October, he sold 143 space heating units. This is because 67 per cent of his customers are ru-

ral and are in the best financial position to make such purchases after the sale of their crops. During this period, Barfield really concentrates on advertising. The reverse is true for the early Spring months. The farmers are getting ready for crop planting and aren't thinking about house heating. At that time, he directs his promotions toward carburetion sales.

According to Barfield, more than half of the space heaters he sells are made by Dearborn.

"Dearborn is our quality heater," he explains, "because it is the cool-cabinet type our customers seem to prefer. Another reason is that Dearborn gives us a great deal of financial help with our advertising campaigns. We work on a 50-50 basis with them to advertise their products. If we buy \$10,000 worth of merchandise from them, they give us a five per cent discount to use for advertising that equipment. That's \$500. They match that \$500 and we have \$1,000 to advertise the heaters."

To complement his radio and newspaper advertising campaigns, Barfield uses other "gimmicks." He offers gifts, such as a complete set of aluminum cooking utensils with a gas range, or a gas line hookup with a water heater installation. He keeps all models of all appliances on his floors all year around. He uses window stickers and billboard advertising. He uses newspaper mats and radio copy supplied by Dearborn.

Going one step farther than testimonial letters, Barfield uses "testimonial people." He refers a prospect to a satisfied customer—to get together personally. He is certain that word-of-mouth approval of the company and its products makes many sales for him.

While Tri-County doesn't keep the usual prospect card system, it does have a prospect call-up system. It regularly checks with the banks financing appliance sales. When a customer has made his first six payments promptly (which gives him good credit rating), the company then tries to sell him another appliance.

Tri-County constantly tries to



Although Adel, Ga., had only 2776 inhabitants at the last count, the Tri-County office there always has a full range of appliances on display, as shown here.

up-grade its appliance sales, according to Barfield.

"We do this for two big reasons," he states. "First, this leads to increased satisfaction on the part of the customer. That helps us sell them other appliances in the future. Second, the higher the quality of the appliance, the lower the number of service calls."

Typical of Tri-County's up-grading policies are that it has sold only matchless gas ranges for the past six years. Barfield tries to sell the customer on the idea of quality.

"I actually tell them that if they want a cheap stove, they should go elsewhere and buy it because I don't want dissatisfied customers. We don't want to be bothered with the service problems that arise from cheaper types of appliances."

Tri-County Gas was founded in 1946. In 1950, Barfield was hired (his wife already was an employee) and on July 1, 1955, he and three other employees bought the firm. Now there are 32 people "and everyone is a salesman" in Barfield's book.

"All of our people are on straight salary," he continues, "and they get fringe benefits. But, we like to think of this as a family-type of operation. It is not a boss-employee setup. Everyone seems to realize that his future is with the company. Therefore, they all do their best to help the company. Of course, not everyone can close a sale. If a route customer mentions that he is thinking of buying a space heater, the driver only gives a preliminary sales talk. Then, some member of the office personnel will follow up and close the sale."

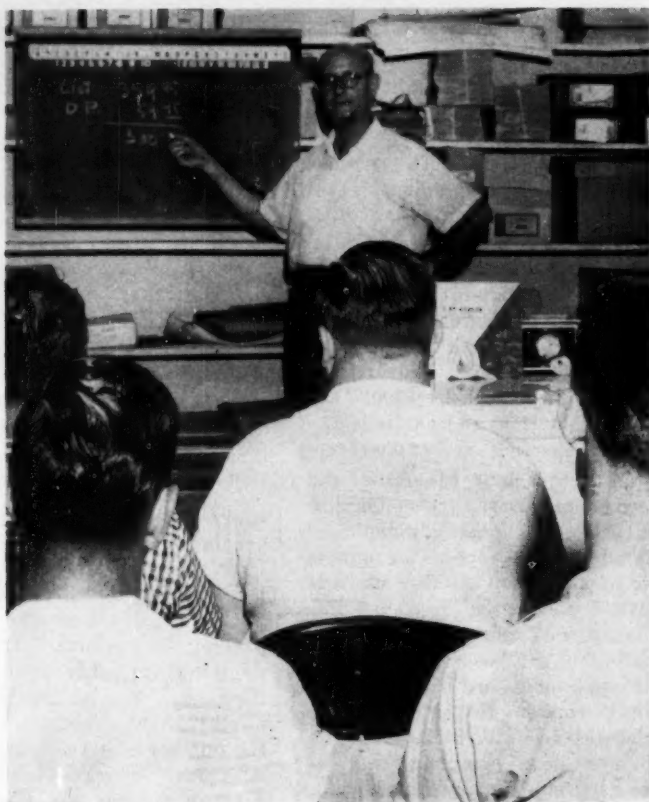
"This working together," Barfield feels, "has been, in a great measure, responsible for the success of the company. This is the best all-around crew that I know of."

The success of which he speaks can be measured in part by the fact that he has to install four more 30,000-gal. tanks to better supply his 5500 customers their 3¼ million gal. annually. And that Tri-County sells more than two freight car loads of space heaters per year!



HOW

does **KINGSLEY WEATHERLY**



Before a salesman can really sell a product, someone has to "sell" him — both on the product and the job of selling it. And, if he is to continue operating at peak efficiency, someone will — in most cases, have to keep him "sold." In a relatively small company, that someone will be the head of the firm. Here is how one top-selling dealer does the job.

"sell" his salesmen to sell his appliances

"SELLING is just like basketball," says Kingsley Weatherly, president of DeKalb Gas Co., Stone Mountain, Ga., National Utilities Inc., Gainesville, Ga. The firms have built an enviable reputation in appliance sales.

"Like a basketball player, the salesman has to be able to think automatically. His answers should be immediate reactions to questions. They should be automatic. He shouldn't even have to think about them."

This is what Weatherly tries to teach his salesmen at meetings he conducts every Monday morning. He feels they must form selling patterns of conduct. They must react positively. At these meetings, he attempts to get his men to develop this proper frame of mind. Using the salesroom, Weatherly's men practice "selling" each other. This is quite tough, for these "prospects" have been through the mill and have heard every possible objection—real or fancied.

"Time is your only asset," is a favorite saying of his. He likes to compare salesmen to assembly line workers.

"If salesmen put in as much time at their jobs as assembly line workers, they'd be rich."

It's his belief that salesmen have the best opportunity to be loafers. He tries to get the men to figure out how much of each day is spent in the presence of a prospect. Figuring on the basis of a nine-hour day, they sometimes spend only 1½

hours with prospects. The rest of the time they are traveling, eating, making preparations, or "just plain loafing."

A teacher for 10 years, Weatherly puts great stock in classroom training. In addition to the Monday morning meetings, he also conducts several sales courses each year.

As is common in the South, REA-subsidized electricity is Weatherly's biggest competitor. He feels that the electrical interests, being a branch of the Federal Government, get the jump on the other fuels by being informed of potential builders' plans in the area. So, he sent a couple of his men to the REA. Disguised as potential builders, they got the story. They were offered: special rates (one cent per kilowatt hour) for an all-electric home, a heat pump to be purchased and installed at wholesale rates, arranged financing, and installation of all equipment at no cost to the builder.

With this information, Weatherly started a school on ways to combat the REA's offers. He taught his men all about electrical heat. He had heating engineers come in and lecture the salesmen on electric heat's advantages and disadvantages. Rate cards of the electrical companies in the area were procured, copied, and distributed among the salesmen. Along with them, each salesman also carries engineering data sheets showing house heat loss and comparative

ultimate costs of each type of fuel. And, if the rates do not favor gas, the salesman will talk of its superiority as a fuel.

You cannot reward these professional "students" with a report card full of straight "A's," Weatherly knows. His brighter "pupils" get cash bonuses, trips to appliance manufacturers' factories, fishing trips, etc. He also realizes that the salesman's wife makes sacrifices when her husband makes evening calls on prospects. To keep things quiet on the domestic front, he occasionally gives her a very expensive pair of shoes or some other feminine bauble.

Most of the bonuses come as a result of sales campaigns that DeKalb conducts in a one-item-at-a-time basis. Recent water heater and clothes dryer campaigns are typical of the methods employed by the company. Both were aimed primarily at present tank owners. All customers were listed and a given number assigned to each salesman. The men were required to see each prospect and give Weatherly a verbatim report. The units were put in as many homes as possible on an approval basis, and expectations are that 90 per cent will ultimately become sales.

To help insure this, the company which owns its own finance company, offers a no-down-payment policy. This is safe because it already knows these customers and their payment record.

A "Gas 'Em 40" promotion is



Using all the skill Dad has taught him, T. J. Weatherly demonstrates a range to a prospect.

another example of a successful DeKalb campaign. The plan was to sell 40 househeating systems. So, the store was kept open for 40 consecutive hours and \$40 wrist-watches were given to the 40 purchasers. Prospects were drawn to the store by various means. Weatherly spent \$3000 in advertising. The store was dressed up with factory-supplied materials. Window streamers, posters, and balloons were given to children. Door prizes (glasses, measuring cups, etc.) were offered. Small household items were sold at cost. People entering the store were asked to fill out prospect cards, which help determine the trends of potential customers' desires in appliance purchasing. Added to the salesmen's reports of conversations with customers and prospects, the cards enable Weatherly to keep his finger on the purchasing preference pulse of his area.

The company continually tries to up-grade appliance sales, improving the quality of the equipment sold by basing it on the increasing income of the customers. It is impressed upon the prospective customer that the best model space heater, for example, will cost only a few cents more per day. Each model of every appliance displayed prominently shows its price and terms. The salesmen are told to sell the quality and features of the

product, plus convenience, economy and flexibility.

Also aiding the salesmen are notebooks which contain testimonial letters from customers and pictures of their homes in which the appliances are being used.

Weatherly says that the sale of 300 to 400 space heating units per year is the backbone of profit for the company.

"These are small volume accounts for us," he reveals, "but they're consistent. It is a good, dependable load spread out among a great many people. And it's a load our customers can (and must) afford. Gas' advantages over other fuels are so obvious that they easily lead to sales of other products."

DeKalb solicits families in all income brackets and sells all types of equipment. In rural Georgia, however, the population has a lower per capita income than in many other states.

Off-season programs by the company have a second important function, other than leveling out financial peaks. One of Weatherly's basic philosophies is to keep his employees busy all year around.

"If you give them a chance to slack off in the summer, they will develop lazy habits," he feels.

To prevent this, he puts the salesmen to work on space heating promotions in which a bulk tank and three space heaters are offered as a reduced price package. Drivers are sent out to paint customers' tanks and do other maintenance jobs. And, at the same time, they are urged to question customers for future sales leads.

The company was started in 1946 with one delivery truck, one 18,000-gal. tank and one salesman. Now, it employs eight "well-sold" salesmen, has 14 trucks and does a total volume of \$1 million per year.

"The reason for the growth of the business is my employees," explains Weatherly. "They are decidedly above average."

This fact is borne out by the length of service of his salesmen, proverbially a nomadic species. Of the eight DeKalb salesmen, three have been with the company for 12 years, one for 10 years, and one for five years. "Selling" his salesmen and keeping them sold, therefore, has been one of Weatherly's big keys to success. ■



W. K. Weatherly eases his salesmen's selling job with a raft of these attractive, strategically scattered signs.

Product tests

the average dealer can use

The simple label "LPG" covers a variety of products: butane, propane, butane-propane mixtures, propylene, isobutanes, etc. All are purchased according to specifications, but two unknowns still face the dealer: 1. Unsuspected product losses. 2. The exact constituents of the gas (sometimes foreign elements in small quantities are introduced during handling, causing freeze-ups, regulator difficulties, corrosion, or other problems).

Many dealers, therefore, could profit by more product testing at their own plants.

One of the nation's largest distributors, Pyrofax Gas Corp., has developed many test methods in its own laboratories. Several can be used by the average bulk plant operator without too great an outlay.

In this article, based on a tape-recorded interview with E. R. Biggins (right), vice president in charge of engineering, operations, construction, and research, some of the principal tests used by Pyrofax are described.



A TOTAL of ten major product tests and checks gives Pyrofax Corp. a good idea as to the quality of the propane that comes to and goes from our 115 plants.

Of all the tests and checks, the two most important are those for detecting high moisture content and hydrogen sulphide. In addition to these two tests, we check or test for: presence of sufficient odorant, presence of excessive odorant, excessive amounts of higher or lower boiling compounds, oil contamination,

accuracy of scales, cylinder weight, proper filling of cylinders, and valve and fuse plug leakage.

These checks and tests: are not necessarily in chronological order, are not mandatory for every ounce of product we handle, and are not all-inclusive. There are other necessary precautions which should be considered due to certain idiosyncrasies of the product and its use. Add to this list a host of other minor checks such as transport or tank car outage and temperature,

periodic relief valve tests, excess flow valve tests, etc., and it is quite evident that a thorough inspection job is done.

The average dealer can do the same thing in most cases and thereby help himself, his customers, and the entire L. P. gas industry. A brief description of some of our tests will help the dealer get the picture.

Let's start with moisture control. The reason for such a test is obvious: removal of excessive mois-

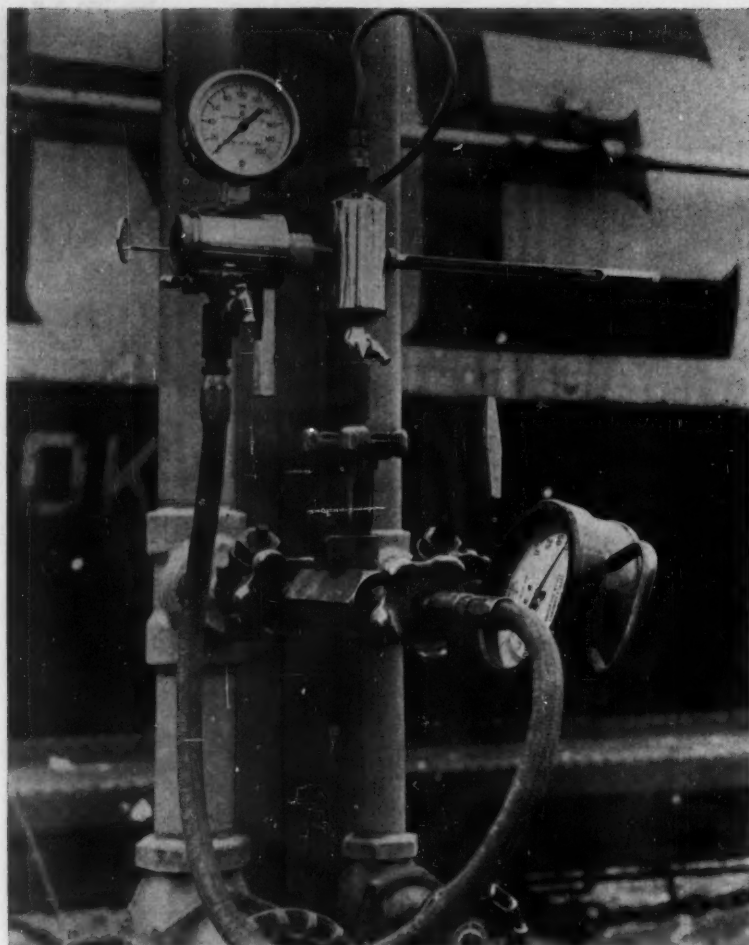


Fig. 1. Pictured above is a close-up view of the moisture and vapor testing equipment. Clearly visible are the dew-point tester and pressure gauge. The gas enters the pressure chamber at about line pressure and impinges on a stainless steel mirror, then passes to atmosphere. The mirror is thermally insulated from the body of the pressure chamber and is cooled by a chiller unit. The surface of the mirror is visible through a plastic window so the exact moment the dew forms may be noted. A thermometer is inserted inside the mirror tube. An optical mirror set at 45 deg. to the window permits the formation of dew to be observed simultaneously with the reading of the thermometer.

ture eliminates freeze-ups. When a freeze-up occurs, the dealer often has to travel as much as eight or ten miles to correct the difficulty. This results in loss of profit as well as an untold amount of good will.

To check for moisture, we use the Bureau of Mines dew-point tester (Fig. 1). This tester consists of a small mirror attached to a thermometer. A sample of gas is blown over the mirror which is slowly chilled to a predetermined temperature. (We will accept a product that tests at -15 deg. F but before storing it we remove more moisture so it will test at -30 deg. F.) The dew-point, that

point at which the gas condenses, is determined by watching the mirror and noting when its shiny surface is clouded by condensation. After the operator becomes familiar with it, this method will determine the dew-point within 2 deg. A Bureau of Mines tester is available from the Refinery Supply Co., Tulsa, Okla., for about \$150.

Natural Gasoline Association of America specifications require that propane pass the cobalt-bromide test, which is equivalent to a dew-point of approximately -15 deg. F. I would say that 95 per cent of product received will pass this test. However, the other five per

cent is apt to be anywhere between 0 deg. and -15 deg., and I have seen it come in as high as plus 30 deg.

Our second primary check is for the presence of excessive hydrogen sulphide, a corrosive compound. Too much hydrogen sulphide can result in odor-complaint cylinders and regulator difficulties.

The NGAA test for corrosive compounds, using the copper strip method, can establish the amount of hydrogen sulphide in the product. This test consists of taking a very thin, shiny copper strip and contacting it with a certain amount of gas for a definite length of time at a definite temperature. The strip tends to corrode and, by empirically determining its color, one can establish the corrosive content.

This test is difficult to reproduce. We can do it in the lab but it is hard to do at the unloading racks where transports and tank cars are emptied. As a result, Pyrofax Gas Corp. has developed a simple test that only takes five minutes. Based on lead-acetate paper, it is empirical, depending on test paper coloration.* Yet, it is much easier than trying to note how much corrosion takes place on a copper strip, especially since copper often corrodes in a very peculiar fashion.

Driers or purifiers are nothing new to the industry, but as far as I know, there is not an inexpensive drier or purifier on the market today. We have to make our own but this can be done relatively simply. The drying material can be activated aluminum, silica gel or molecular sieves (Fig. 2). Such a drier can be fabricated and installed for less than \$300. It is primarily an 8-in.-diameter steel cartridge about $3\frac{1}{2}$ ft long holding the drying material and a screen or a stainless steel pad to keep the material from getting into the lines. The dryer can process about three cars, or about 30,000 gal., before the drying material must be reactivated with heat. The material can be used over and over again. A typical dryer is shown in Fig. 3.

A purifier is made in a similar fashion and is filled with moist

* Details of this test are confidential.

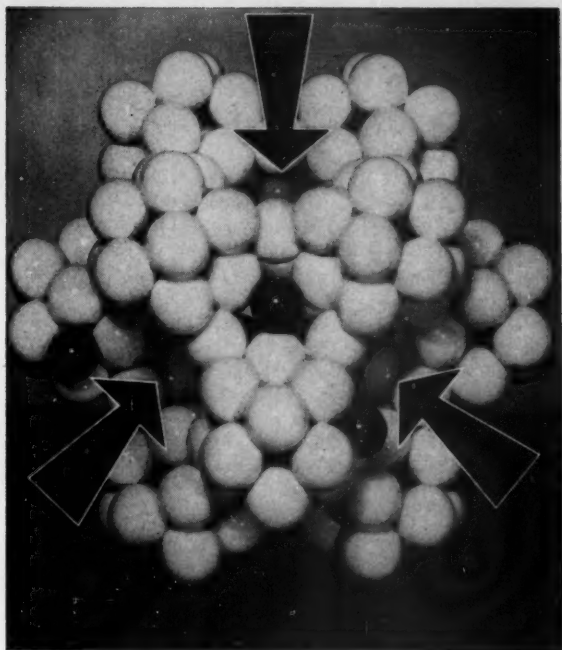


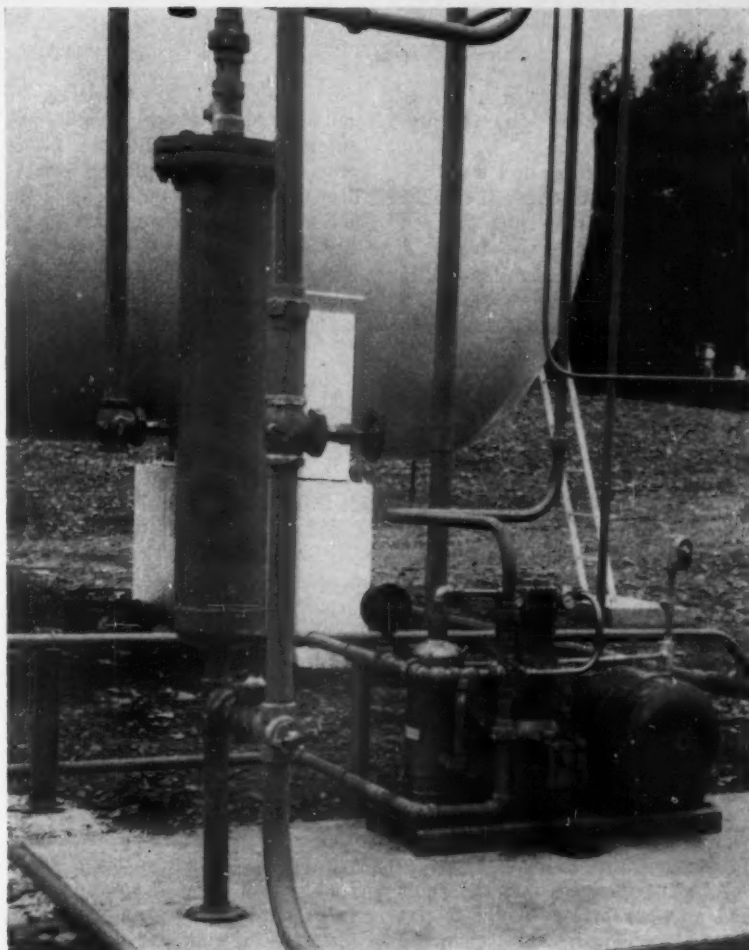
Fig. 2. This photograph of a model of a molecular sieve crystal unit (left) shows how the arrangement of atoms forms several pores opening into a single cavity. Molecular sieves are synthetic absorbent materials, a crystalline form of sodium aluminum silicate. Such materials, occurring in nature, are called "zeolites." Molecular sieves can dry gases sufficiently to give dew points -100 deg. F under production conditions. They have high capacity for drying gases at temperatures up to 200 deg. F or more.

lime. Gas accumulates moisture as it passes through the purifier and it must be redried before it is stored.

We also check our product for oil and butane content by a mercury-freeze test. This test assumes a greater importance every day, especially in plants where the gas goes to internal combustion engines. We have experienced customer complaints of oil or some of the heavy ends of LPG, resulting in operating difficulties in engines.

By means of the mercury-freeze test (Fig. 4) we are beginning to solve this problem. The test is what might be called single plate weathering. To a 100cc sample in a graduate is added a half cc of mercury, which melts at 39 deg. F. The sample is allowed to evaporate, and since propane boils at -44 deg. F, the mercury freezes solid. The graduate is then shaken and the mercury bumps against the sides, causing a distinct metallic clink. As the propane level in the graduate goes down and a high concentration of butane residue is approached, the mercury softens and makes a dull thud. Thus, by recognizing the sound of the mercury hitting the sides of the graduate, the presence of butane can be detected and corrected. If oil is present, it will remain in the bot-

Fig. 3. Standard view of the vapor compressor and the drying equipment (below) at a typical Pyrofax gas cylinder filling and bulk plant. A liquid pump (not shown) is on the right. The dryer (left) is a steel cartridge which holds the drying material and a screen to prevent the material from getting into the lines.



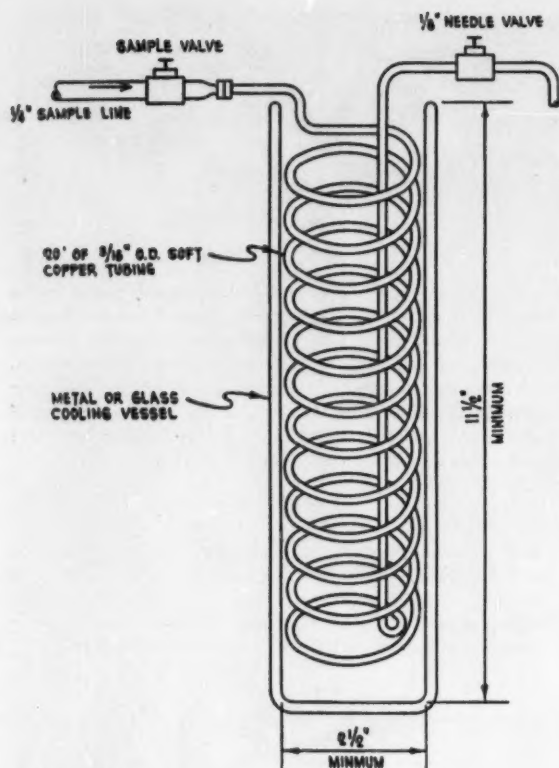


Fig. 4. Apparatus used for precooling the sample for the mercury-freeze test. The container is filled with a precooling liquid (propane is suitable) having a boiling point at least as low as that of the sample. The propane to be sampled is run through the line, which is purged, and into a 100-ml. cylindrical pyrex graduate marked off in milliliters. The graduate contains one or two grains of charcoal and 0.5 ml. of mercury. Enough sample is poured into the graduate to completely fill it. The contents of the graduate are allowed to weather to approximately 50 per cent of the original volume with no application of heat. By grasping the top of the graduate and shaking it, the condition of the mercury can be determined. If it has solidified, it will give off a metallic ring. The graduate should then be continually shaken (still without application of heat) and when the ringing sound gives way to a dull thud, the mercury will have melted. An immediate reading of the level of the sample remaining will give the volume of hydrocarbons other than propane in the sample.

tom of the graduate after the propane boils off.

To test for lighter or lower boiling compound, we check the vapor pressure and temperature of each shipment as it is received. A standard pressure gauge is used. If the pressure on the car or tank truck is high, the lower boiling compounds are discharged in a safe manner. This can only be done, of course, if the plant has an isolated location. If discharging these compounds is not possible, the shipment is rejected.

A further check concerns our guarantee that each of our filled cylinders contains 100 lb of "Pyrofax" gas. To do this, we use over-and-under indicators on our weighing scales which tell at a glance if a cylinder is accurately filled (Fig. 4). They are quite accurate.

Automatic shutoff valves on the cylinder filling leads are another item used in all of our plants (Fig. 5). We find that if they are set properly, they produce greater accuracy than manual operations. The weight on every cylinder is checked as it comes into the plant and an appropriate weight is put on the beam-type scale. When the

cylinder comes up to weight, the automatic shutoff halts the filling process. After the filling lead is disconnected, the cylinder is again checked for actual weight.

Every plant we have is equipped with 250 lb of test weights. Purchased from the scale manufacturers, they are the same type as used by state weights and measures men. They are kept right at the scales and all scales are checked every morning before cylinder filling begins. It is an extra precaution, but it is one of the ways we reduce our gas losses.

As long as I am talking about keeping down gas losses, let me pass along this fact. If you ask dealers in general what their gas losses are, 90 per cent cannot tell you! I think they might be surprised if they knew. We hold our losses at approximately one-half of one per cent.

Before being released to the field, each cylinder is checked for leakage of the valve outlet by means of a small mechanical leak tester. We do not put liquid in the valve. Liquid can seep down into the valve parts and eventually be blown into the system regulators. We

have developed a small device that uses an ounce-pressure gauge. It is placed against the outlet of the cylinder. If there is a leak, the pressure gauge rises in about two seconds (see Fig. 6). As a cylinder may occasionally remain in a warehouse for some time before it is used, this leak test prevents an underweight tank from being delivered to a customer. It also eliminates a potential hazard in the warehouse.

This tester is a very simple device to operate. Our cylinder valves are the top-outlet type. After filling is completed, a man rolls the cylinder over to full stock where he inserts the leak tester device into the valve outlet. He then goes back for another cylinder and rolls it over while the first one is tested. When he returns, he notes the action of the gauge. If no leak is indicated, he places the tester into the second cylinder valve and so on. There is no time, no effort, no fuss, no leaks! We make these assemblies ourselves. They are primarily a small, but very accurate, bellows-type gauge that measures ounces instead of pounds per square inch.

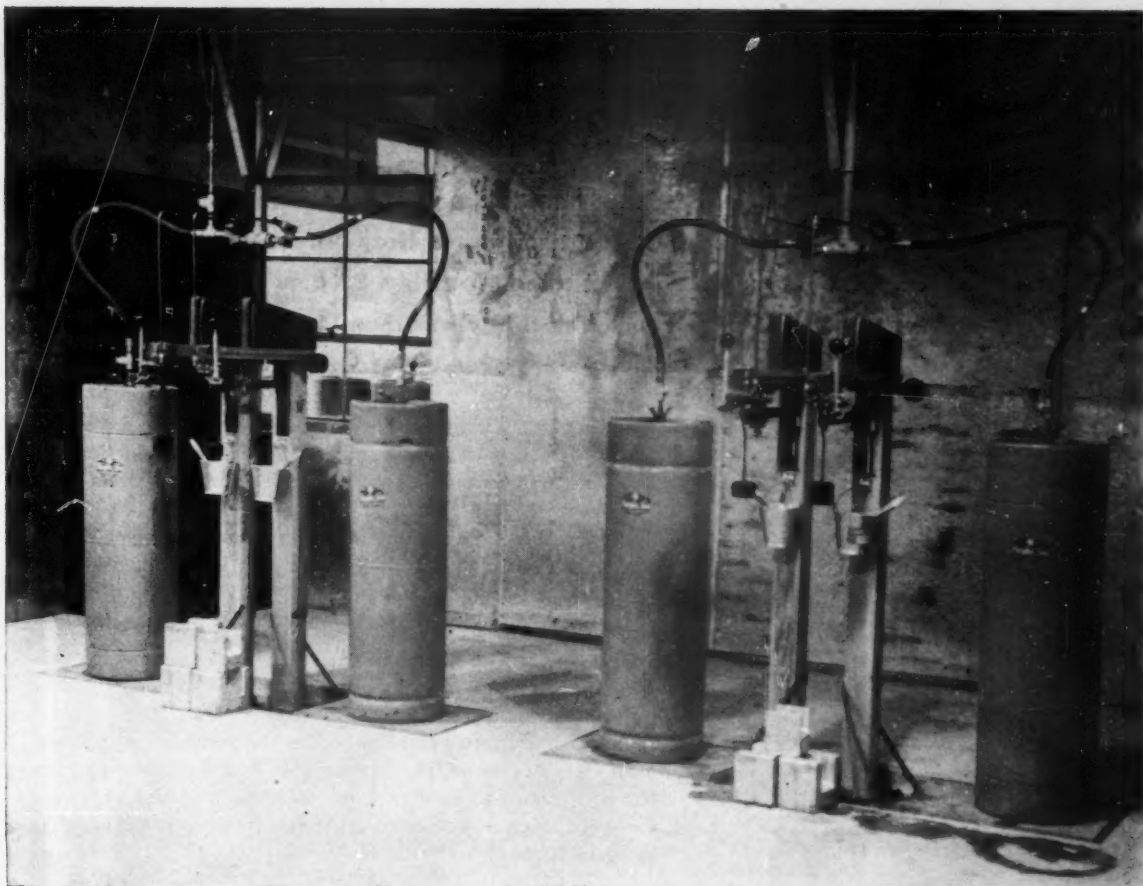


Fig. 5. A typical Pyrofax gas plant interior. Four cylinders are filled simultaneously. At the base of each weighing machine are

the standard test weights. Also shown are the over-and-under indicators and the automatic shut-off valves.

The most important thing to consider with most of these tests is that they will cost the small dealer very little in the long run. He will find that he quickly saves the cost of the equipment by minimizing losses and customer complaints.

As a conclusion, I would recommend that the small dealer make his needs for test equipment known to his supplier and try to work through him in obtaining the required apparatus.

I further recommend that he join and support the Liquefied Petroleum Gas Association and bring his difficulties to its attention. The LPGA represents the entire industry and is the only organization for solving the universal and individual problems within the LPG industry. The large dealers as well as the small dealers need help. The best way to help ourselves is to help each other. ■

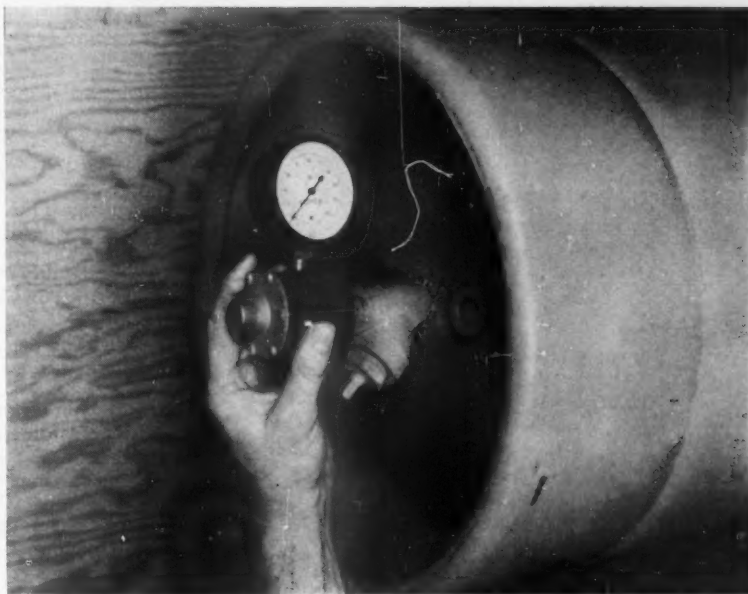
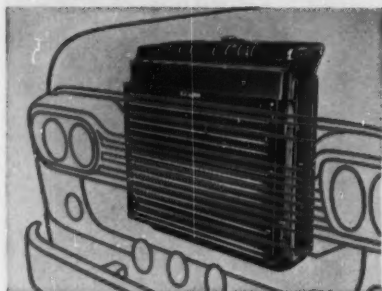


Fig. 6. This photograph illustrates the leak test gauge and shows clearly its ease of operation.

NOW! Certified Durability



CLOSER TEMPERATURE CONTROL obtained with automatic radiator shutters means longer engine life, more efficient operation. Temperature variation between 167° and 187° with shutters as compared to 102° to 181° without shutters was reported and certified in loaded vehicle road tests.



LONGER WIRING HARNESS LIFE is the direct result of Ford's greatly improved electrical wiring system for 1960. Ford's '60 wiring harness and the 1959 wiring harness were subjected to shaker table tests plus constant exposure to oil and water vapors, and temperatures of 200°. Certified test results show a threefold increase in 1960 wiring harness life.



INCREASED FUEL PUMP RELIABILITY is an added benefit from Ford's submerged-type electric fuel pump. Certified results of dynamometer tests showed no vapor lock with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical fuel pump resulted in a power loss of 9% under same conditions.

It's a fact! Numerous reports from high-mileage operators of Super Duty Trucks attest to Ford's outstanding durability. Studies by an independent research firm provide certified proof that these models are even more durable for 1960.

Ford Super Duty Trucks have earned a reputation for exceptional performance and durability since their introduction two years ago. Shop service records of many leading fleets show Super Duty tractors with mileage readings between 150,000 and 250,000 and no repairs other than normal maintenance. Similar testimony to the dependability of these Big V's by other satisfied users is being added each month. Is it any wonder that '59 sales of these units were more than double those of 1958?

And for 1960, the Ford Super Duties offer additional refinements. Bigger optional axles and increased GVW's to permit greater payloads and more profitable operation. Automatic radiator shutters to keep the engine temperatures within the most efficient operating range, improved submerged-type electric fuel pumps to prevent vapor lock, and redesigned wiring for more reliable operation are typical of the improvements to be found in these units.

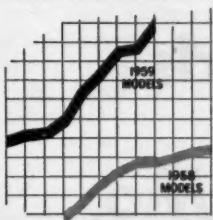
The changes offered for 1960 were tested and evaluated by a leading research organization. Certified results of the studies by this impartial firm (name available on request) provide proof that Ford's Super Duty Trucks are even more dependable.

- **Certified Durability through closer temperature control!** Independent research engineers certify that Ford's thermostatically controlled radiator shutters kept water temperature between 167° and 187° in severe mountain grade operation. The test truck with shutters blocked open under same operating conditions had a temperature range from 102° to 181°. The temperature variation of only 20° with shutters means less expansion and contraction in block and heads. Higher, more constant temperatures permit oil to circulate more freely, reducing internal friction. All these factors contribute to longer engine life.
- **Certified Reliability with longer-lived electrical system!** Thicker insulation on wires resists deterioration by heat, oil and gasoline. Asphalt-impregnated loom and plastic-coated mounting clips protect against abrasion. Certified results prove that the 1960 wiring harness has three times longer life.
- **Certified Reliability with Ford's submerged-type electric fuel pump!** Dynamometer tests of engines with submerged-type electric fuel pump and conventional mechanical type showed that vapor lock was non-existent with Ford's electric pumps at temperatures up to 200°, whereas incipient vapor lock with mechanical pump resulted in a power loss of 9% at an underhood temperature of 200°.

Endurance tests were run on alternators, two-speed axle speedometer adapters and other related components with similar results. Get all the facts at your Ford Dealer's now!

in Ford Super Duties!

1959 FORD SUPER DUTY
TRUCK SALES MORE THAN
DOUBLE THOSE OF LAST YEAR



"Our first Ford C-1000 tractor has logged 190,000 trouble-free miles since March of '58,"

says Robey W. Estes, Vice President and General Manager of Estes Express Lines, Richmond, Va. "We haven't had a single road failure and we only bring it into the shop for regular preventive maintenance work once a month.

"We use the 477 engine and find oil consumption is exceedingly low . . . only one or two quarts added between 3000-mile oil changes.

Engine compression at 190,000 miles is still high and fairly equal and our drivers say that power and pep are at about the same level as when the truck had been run only 60,000 miles.

"We are grossing between 52 and 56,800 pounds with our Ford Tilts. They are giving about the same gas economy and better oil mileage than other makes in our fleet. We bought our fourth Ford C-1000 tractor last month and hope to add more soon."

FORD TRUCKS COST LESS

LESS TO OWN . . . LESS TO RUN . . . BUILT TO LAST LONGER, TOO!



Walter A. Schuette, manager of Hausgas Inc. together with local officers of the Washington, Mo. Chamber of Commerce enticed employees of a plant some 35 miles away to settle in their town.

"Imported" clientele builds business for Washington, Mo.

WHAT'S good for a city should be good for an individual, be he baker, candlestick maker, or L. P. gas dealer. Build your town and you'll build your own business.

That's the kind of thinking that is frequently called "enlightened self-interest." It's the kind of thinking that led a group of businessmen in Washington, Mo., to entice employees at a new Chrysler plant some 35 miles away to settle in their city.

An idea is born

The idea was born in the brain of Walter A. Schuette, manager of Hausgas Inc., local LPG dealer, and it was through his efforts and those of other officers of the local chamber of commerce that it was carried through to its initial successes last summer.

Schuette knew that Chrysler was building a huge new plant between St. Louis and Washington, and simultaneously closing down its Evansville, Ind., plant. Where would employees come from? Would Chrysler recruit from the available labor pool in the St. Louis area or would the company make it attractive for released Evansville employees to transfer to the new plant? How would the union react?

If the way were cleared for Evansville employees to make the move, could they be persuaded to settle in Washington? How?

Laying the groundwork

Having formulated these questions in his own mind, Schuette posed them to the other officers of the chamber of commerce, of which he is vice president. Out of their discussions came the formation of a "Washington Development Committee," whose first task was to lay the groundwork for a citywide "entice Chrysler employees" drive.

The first meeting of the 10-man committee was held Jan. 31, 1958, almost a full 18 months before the new plant was due to open. The first order of business was to get some answers from officials and employees in Evansville.

Committeeman George Wilson was dispatched to the Indiana city to get the facts. What he came back with was encouraging for Washington. First off, it appeared that many employees *would* move. Many had seniority that they couldn't very well give up. Evansville was already suffering from a rising unemployment curve caused by the loss of another major industry and two minor ones. It seemed unlikely that many of the 6500 Chrysler workers would voluntarily

join the ranks of the unemployed in Evansville.

There was another "plus" for Washington in the situation as Wilson laid it out. Many persons who intended to make the move had no intention of settling in the "big city"—St. Louis.

The new plant would employ 3500 people. It was a good bet that, if there were no local union restrictions to bar their way, those who could would move.

The problems

But there were problems to be ironed out. Did Washington have room for them? How could it make room? If most of the employees owned their own homes in Evansville, would they be able to unload them quickly in what might easily be a distressed market? Would this then mean that they must rent until they could sell them?

These and many other questions came up during the meetings that followed. Not all were susceptible of solution immediately, but Washington went doggedly ahead, determined to make the most of whatever the situation might be.

A committee is set up

The most pressing question was whether Washington could handle an influx if it came about. It was decided that a committee of real-

FIELD REPORT

tors, builders, and finance men should be set up to investigate, with Wally Schuette as the chairman.

In March, Schuette held his first meeting, at which the following questions were posed:

Are there lots available or is there need for land development? If there is a need, how can it best be satisfied?

Is construction money available to builders and developers? If not what is needed per unit, and how can it be obtained?

Is financing available after homes are built?

Is rental property available?

Out of this meeting, it was established that there was ample land and construction money, but FHA money for financing was not available at the time, and rental property was scarce.

Finance committee organized

Questions three and four, then, needed further work. A building and finance committee was organized to make recommendations on long-term loans. It was proposed that a corporation be set up to handle second mortgages. Ultimately, this was done.

The rental problem turned out to be a tough nut to crack. At today's high investment costs, rental properties in such areas are generally not very wise investments. But there was a hope—could speculative building be encouraged, and could present renters be persuaded to buy the new homes, releasing their domiciles for the newcomers? This idea was broached by the chamber president, and was enthusiastically endorsed.

In addition, a central rental agency was established to help prospective residents find lodgings.

Persuasion campaign

Convinced that these problems were not insurmountable, the chamber officials began laying plans for the campaign of persuasion. Totting up the town's attractions, they decided they had something very definitely worth selling.

Washington is a pleasant little town (population, 7000) some 50 miles west of St. Louis, located about 10 miles off Route 50, a main east-west artery. It's old and well

established, but pleasantly progressive at the same time. It has excellent schools, fine churches, an outstanding hospital, and attractive recreational facilities. Adding to its local color are corn cob pipe factories—it's the undisputed corn cob pipe capital of the world—and a now defunct zither factory. But it also has some basic industry and is a thriving farm center. It's Washington county's largest city, and the biggest between St. Louis and the state capital, Jefferson City.

The first step in the sales campaign was to update the city's bro-

chure. New photos were made of the town's strongest points and were posted on a pegboard set up in Evansville's union hall.

Slide films were also made, and a local radioman provided a tape-recorded commentary to accompany them. These were taken to Evansville, where a chamber of commerce representative presented them at union meetings.

Working arrangements were established with the Evansville unions, with management, and with the chamber of commerce there. Schuette and other Washingtonians paid visits to the old plant to find

Schuette's builders committee undertook a survey to establish the housing potentialities. Eight local builders were asked the following questions:

Recap of Home Builders Survey					
	High	Low	Total	Yes	No
Are lots available				X	
How many (total)			171		
What is price range	1,500	1,000			
Are they in City limits			139		
Improvements - water			139		
sewer			139		
street			144		
curb			49		
FHA approved			139		
Will you sell lots only				3	4
Average cost -					
2 bedroom house	12,500	10,000			
3 bedroom house	14,500	12,000			
Extra for -					
Breezeway	1,500	400			
1 car garage	1,000	650			
2 car garage	2,400	800			
brick	1,200	800			
Landscaping				4	4
Build with FHA approval				8	
Do you have a financing program				6	2
Will you build to personal plans				8	
Completion time	130 days	60 days			
How many homes for speculation			19		
How many can be built in 6 months			63		
Is construction money available				8	
Do you handle closing				4	4
Financing: Banks and Buildings & Loan have funds available; at present FHA financing is being done out of town and is available through builders.					
Interest rate - 6%					
Loan % - Banks	66 2/3				
Buildings & Loan	75				
Time - Banks	10 year balloon to 15				
Buildings & Loan	15 year maximum				
Taxes - assessed at 30% of valuation					
City			County		
General revenue	90		State	7	
Electric light fund	15		County revenue	50	
City parks	10		Road and Bridge	25	
Library	10		School	150	
Interest and sinking fund	5				
Fire Department	10				
Total	140		Total	232	
Total tax rate \$372					

Washington's efforts bear fruit and the influx begins. Fifteen families have already moved in and more are expected.

out more about employee needs, preferences, prices they could afford for homes, going rents, etc.

Getting Washington ready

All the while, Schuette and other officials were busily engaged in getting Washington ready for the newcomers. One idea that presented itself was to try to lure "feeder" factories into the town—factories that produced articles used in the Chrysler assembly plant. It was argued that these would strengthen the Chrysler ties but, more importantly, would provide work for wives and other members of the displaced persons' families. It was an excellent idea, but not feasible. Supplier plants were all well established already.

Schuette's builders committee undertook a survey to establish the housing potentialities. The eight local builders were asked questions as to availability and price of lots, improvements, average cost of "average" homes, construction time, whether they would build on speculation, financing available,

and taxes (see recap). These factors the chamber was able to present to the prospects, easing the uncertainty they might have had over making the move to Washington.

Biggest single sales effort

Probably the biggest single sales effort was the special section of the *Washington Missourian*, published Feb. 19, 1959. This contained the whole story of Washington in a profusion of pictures and words. It was liberally supported by a wealth of "Welcome to Washington" ads. The section was distributed to all employees in Evansville.

These activities took the play completely away from other towns in the general vicinity of the plant, says Schuette. The most any of them did was set up special bulletin boards at the Evansville plant.

By the time June 1959 rolled around, Washington had just about exhausted all the possibilities for luring the employees. Now there was nothing to do but hold its collective breath and see what hap-

pened. June was the month when the big move was scheduled to get under way.

The results

Things *did* happen. Washington's efforts bore fruit and the influx began. On August 14, Schuette had this to say:

"We are now confronted with the problem of having invited these people to come to our city. So many are now looking for a place to live but are unable to find one that at a meeting of our chamber of commerce yesterday a committee was set up to try to find rooms.

"It was reported that some 15 families have now moved into our town and six have purchased homes. A great number are interested in living in the area a short time first to see whether they like the community. Because of the labor abundance in Evansville, the sale of homes is a difficult matter.

"All I can say is that the efforts certainly were successful, and if there was one failing it was the lack of rental houses. On the basis of present economics, it's impossible to make them pay out."

When You Move Into This Area

Look Up the Leader in Gas

Hausgas

Meter Gas Service

In Town or Country

- COOKING
- WATER HEATING
- REFRIGERATION
- HOME HEATING

Service Is Our Greatest Asset

You Will Find....

- Trained Service Personnel
- Replacement Part Stock
- Courteous and Understanding Employees
- Union Shop

Hausgas, Inc.

Phone 191

Washington, Mo.

St. Clair, Mo.

Phone 134

WE SERVE ALL OF FRANKLIN AND
PART OF ST. LOUIS COUNTY

Hausgas' ad was one of many "Welcome to Washington" ads which ran in a special section of the *Washington Missourian*, published Feb. 19, 1959. The section contained the whole story of Washington in a profusion of pictures and words.

The town can hit its goal

Judging from the report, Washington can easily hit its goal of about 35 or 40 new families—if it can eventually house them. Perhaps it will exceed the figure. Whatever the ultimate outcome, Schuette and the other merchants have built up their clientele. They've supported and promoted their home town. They've stimulated local contractors to do more speculative building. They've pinpointed a need for more adequate rentals.

They may have surprised a lot of people who didn't recognize the many advantages that their own town had to offer.

In all these ways, Schuette and the other chamber of commerce men are building their town. Whatever helps to put Washington on the map will help to put them there, too. ■



...prevailing spirit

All around is the spirit of thanks and best wishes.
As we come to the end of another year we wish
to express our gratitude for your friendship and
continued confidence.

To you we send sincere Holiday Greetings.

Sid Richardson **GASOLINE CO.**

629 FORT WORTH CLUB BUILDING • FORT WORTH, TEXAS

REGIONAL REPRESENTATIVES

H. M. JONES
5123 NO. NEW JERSEY
INDIANAPOLIS, INDIANA

MARVIN L. DOSS
3148 SANDEFER
ABILENE, TEXAS

B. E. PATTON
6446 XERXES SO.
MINNEAPOLIS, MINN.

G. C. ANDERSON
7737 HAMILTON ST.
OMAHA, NEBRASKA



Here's the replacement for the original SchagrinGas combination truck. This one is a '59 Chevy. Primarily intended for cylinder delivery, it can also deliver appliances and is always ready for an emergency bulk delivery.

In this close-up (right) of the bulk tank, note the false end that serves as a hose reel and the drop gate that encloses and protects the meter, pump, and regulator.

Combination truck so useful, replacement is needed



THE small, but annoying problem of the out-of-gas call is one of the perplexities facing the LPG dealer. Four years ago, SchagrinGas Co. of Middletown, Del., neatly solved the problem with a combination truck that serves three ways. A true jack-of-all trades, the truck worked out so well and saved the day so many times that it recently had to be replaced, according to Milton Levinson, vice president of the firm. The replacement, shown on this page,

could well be the answer to many other dealers' out-of-gas problems.

The picture four years ago was this: SchagrinGas had 3000 accounts spread around a 50-mile area. Ninety per cent of the customers were bulk, the remainder on cylinders. The company also sold all types of gas appliances.

A bulk truck that would sit around waiting for out-of-gas emergencies to occur would have been a very expensive luxury. What was clearly needed was a new brand

of animal, a truck that could handle out-of-gas calls, but most of the time would be kept busy doing something else, like delivering cylinders and appliances, for example.

When it came time to replace the combination truck, many changes were made to make the replacement more practical in every way. The truck's primary function, however,

EXCLUSIVE
BPN

POWELL LPG VALVES

*for the safe handling of
Butane and Propane gases*

Look to the leader - POWELL - for LPG Valves designed and engineered to safely and satisfactorily handle liquid or gaseous Butane, Propane, and other Hydrocarbons.

One of their many Powell advantages—the trim and internal working parts of all the valves are easily and quickly renewable.

Powell LPG Valves are available in Globe, Angle, Gate and Check Patterns in both bronze and steel.

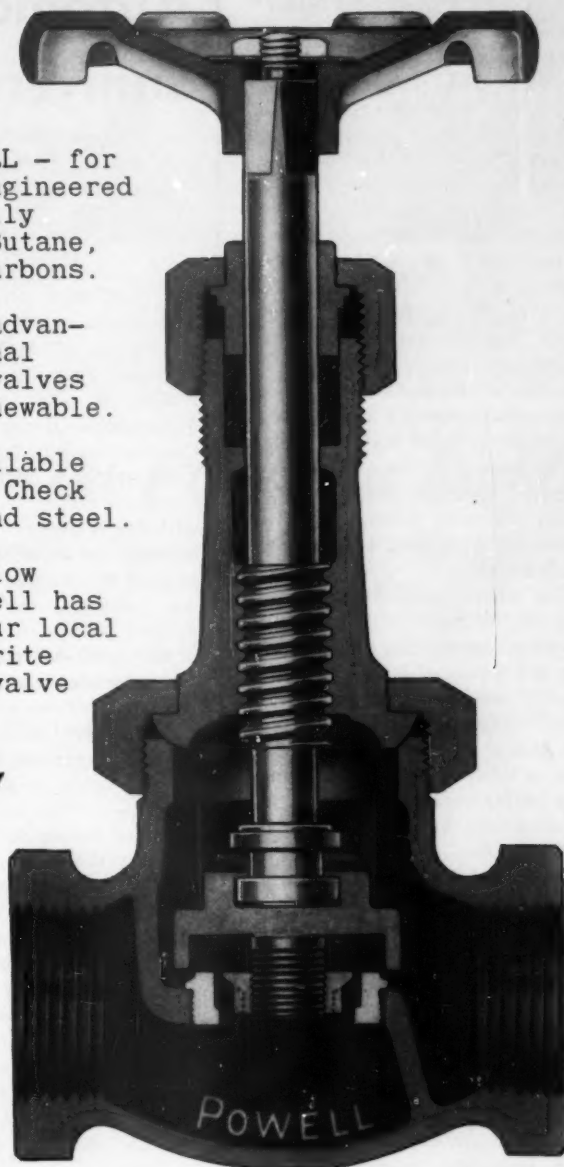
For all your industry's flow control requirements—Powell has the right valves. Call your local Powell distributor...or write us. We'll solve all your valve problems!

THE WM. POWELL COMPANY

Dependable Valves Since 1846

Cincinnati 22, Ohio

Fig. 8102—Bronze L. P. G. Globe Valve (Sectional) for 400 lbs. WOG. Union bonnet, special composition disc, screwed-in seat rings.



(Listed by Underwriters' Laboratories, Inc.)

POWELL...world's largest family of valves

remains the same—cylinder delivery.

A '59 Chevrolet V-8 with four-speed transmission and power take-off was selected as the base for the unit. Directly behind the cab, a 200 gal. tank was mounted transversely. A false end on one end of the truck serves as a reel for 75 ft. of liquid hose. The bulk delivery section is completed with a Neptune Printmeter, a Viking pump, and a regulator, all enclosed and protected by a small drop gate.

Behind the tank, a strong but light open-top body was constructed. For maximum useable space, the body was placed high enough to clear the dual rear wheels. Two design features of the truck are worth special attention.

In place of deck plate, "Poly-Rock," a new material, was used, saving 1 2/3 lb per sq ft. Poly-Rock is a heavy, "Masonite"-type material with a stone-like exterior finish. Levinson reports that—next to saving weight—one of the big features of the material is its surface, which remains skid-proof in wet weather. Other features claimed by the manufacturer, Plant Maintenance, Inc., are that Poly-Rock is oil, acid, and weather-proof; inexpensive, and splinter, dent, and crack resistant.

The other important design feature of the body is the lift gate. Levinson terms this "one of the greatest pieces of labor-saving machinery we have had in many a year." With the lift gate, one man can easily load an empty 420 lb tank, a filled 200 lb tank, a range, or a refrigerator. Previously, two or three men was required for any of these jobs.

Slung under the forward section of the body (just ahead of the rear wheels) are a pair of parts boxes, one on each side. They are large enough to accommodate necessary fittings, plus the men's tool boxes.

Levinson reports the truck is well-balanced and handles well.

Would he recommend a combination truck to other dealers?

"Yes . . . to any dealer who has both bulk and cylinder business and wants to save the expense of keeping an extra truck around as an emergency vehicle. Dealers with 1500 accounts or more should be especially interested." ■



**ANNIVERSARY
AUTOMATIC HEAT**

In 1960

Automatic heating's 75th anniversary to be celebrated

Minneapolis-Honeywell solicits industry support for giant diamond jubilee program.

NINETEEN-SIXTY, the diamond anniversary of automatic heat, will be the biggest promotional year in the history of heating if plans now cooking at Minneapolis-Honeywell Regulator Co. receive industry-wide support.

Honeywell is one of two companies whose birthdate, 1885, coincides with the introduction of automatic heating. In an effort to enlist the support of all segments of the heating industry, the company has pledged record-breaking promotional funds to spearhead the anniversary observance.

This ambitious program was detailed before two dozen editors of leading magazines in the gas and heating fields at a company-sponsored conference in Minneapolis in October. Acting on suggestions offered by the group, Honeywell devised a 75th anniversary symbol which it hopes will be adopted throughout the industries to unify all promotional efforts.

In keynoting the "Diamond Jubilee Showboat" presentation, Sales Vice President Kent Wilson said:

"Our belief is very strong that the best way—perhaps the only way—for us to advance our own interest is to place our primary efforts

toward expanding the entire market, with the hope of getting a fair share of new or additional business from this expansion."

Advertising Vice President Herb Bissell emphasized that many of the promotional events are designed to directly benefit large segments of the heating and air conditioning industry with no direct advantages to Honeywell.

Ten "industry-centered Diamond Jubilee programs" make up the 1960 blueprint. Included are:

- Operation Door-Opener, a six-part direct mail campaign. Three spring mailings (one of which is a can of fresh air from Hawaii) will stress air conditioning. Three fall mailings will remind the home owner that his heating system needs a periodic checkup, just as does his car, and reminds him that heating systems—like automobiles—must be replaced periodically.

Space is reserved in the folders for individual manufacturers' messages, and a return card with the local dealer's imprint is offered as a companion piece.

- Weather Station, a campaign introducing the company's new integrated comfort control and indoor-outdoor weather information panel. The idea, as carried out in advertisements, kits, and homeowner booklets, is to "establish the Weather Station as the symbol of the modern convenience of central air conditioning."

STAFF REPORT



This huge 10,520 wg T-1 Transport and four 3,075 wg T-1 bobtails recently purchased by the Dri-Gas Company brought the total of Mississippi Tank units in its fleet to 12.

Repeat Sales mean the Product is Right!

Nothing indicates the success of any product like repeat sales. And we at Mississippi Tank have built our company on repeat business. Take the example of the Dri-Gas Company, which has 40 bulk plants located throughout the seven Midwestern states. Dri-Gas bought its first T-1 delivery, a Mississippi Tank Titan, in September, 1957, and since then has added 10 more T-1 bobtails to its fleet—all *Mississippi Tank Titans!*

Dri-Gas has found that top payload isn't all there is to Mississippi Tank units. Constant use has proven that they're built stronger to carry the extra load. Operating records show outstandingly low delivery costs per gallon due to trouble-free operation and minimum downtime.

**If you're interested in units that will haul more, longer,
MAIL THE COUPON TODAY!**



**MISSISSIPPI
TANK COMPANY**

INCORPORATED

Hattiesburg, Miss. JUniper 3-0262

MISSISSIPPI TANK COMPANY, Inc.
Hattiesburg, Miss.

Without obligation send literature on:

.....Delivery unitsT-1 Transports

..... Domestic and Bulk Storage Tanks

NAME

COMPANY

ADDRESS

CITY and STATE

Primary efforts are toward expanding the entire heating market

- **Weather Watch**, a long-range forecasting radio program. The idea behind this is to make the audience conscious of the forthcoming extremes of weather long before they arrive—at a time, in other words, when the homeowner should be thinking of buying or improving his heating equipment.

Irving P. Krick, famed weather forecaster and a pioneer in efforts to predict weather conditions months in advance, has contracted for this service.

The program will be aired over weekend "Monitor" on some 200 outlets in the NBC chain throughout the country. It will be in two six-week segments, one in the spring and one in the fall. On each Sunday, three five-minute broadcasts will be made.

To focus attention on this program, Honeywell will advertise extensively and provide local-level materials.

- **Milady's Climate**, a continuation of the 1959 consumer education campaign. Included in materials are a movie, a booklet, and national advertising.

- **Two-Furnace, Two-Zone 1960**, promoting the zone idea among owners of "quality" homes. This is a continuation of the 1959 program.

- **Give 'Em Sell**, a trade education plan to help dealers develop merchandising skills. A three-part merchandising lesson will be given to them through a series of three four-page full color advertisements in a number of trade publications. Reprints will also be available in folder form.

- **Parade of New Products**, a consumer campaign to introduce the Weather Station and other new products.

- **Win a Wagon**, a continuing advertising and sales promotion contest for dealers who sell in the industrial-commercial market. Dealers will be invited to estimate how many times a torture-test model of the new Honeywell R478 Electronic Flame Safeguard will cycle before it stops. The winner will receive a new 1961 Oldsmobile; 10 runners-up will receive gas-powered "Go-Karts."

- **Put Yourself in Hot Water**, a program aimed at building water

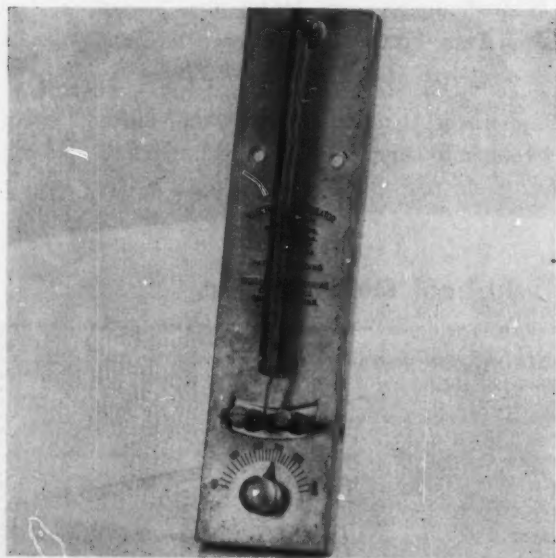
heater replacement sales by at least 30 per cent and upgrading 25 per cent of replacement sales to larger and higher quality models. Certain promotional activities will enable a dealer to join the "Put Yourself in Hot Water" club; four club members will win luxury vacation trips to such glamor spots as Acapulco and Bermuda.

- **60 Cycle in '60**, a program to introduce a new line of electric heating controls.

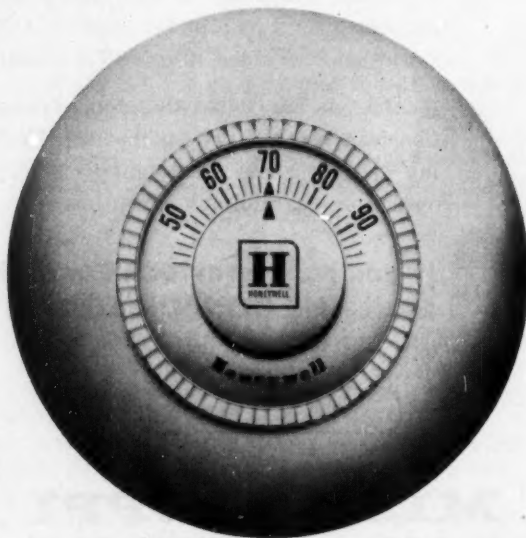
Several of the new products to be introduced in 1960 were also unveiled. Included is an electronic cleaner designed for the home.

In addition to the discussion of products and promotions, the visiting editors were treated to a tour of the company's aeronautical laboratories. Among the space-age marvels which they saw was the space cabin simulator, which was being given final touchups before being delivered to the air force. It is in this model that the "space men" will be sealed for 30 days to test the ability of man and equipment to withstand the conditions of outer space. ■

Then and now



Seventy-five years of automatic heating progress are symbolized in these pictures. On the left is the first home thermostat built by a Honeywell predecessor company. Upon a change in temperature, the crude thermostat caused a "damper flapper" to open or close fur-

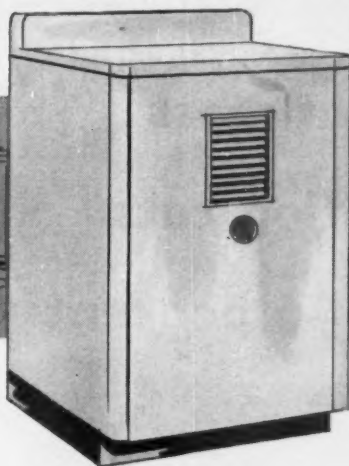


nace damper doors through the bending of a bimetal strip. In 1952, Honeywell introduced the heating industry's first round thermostat (right). Since that time it has proved to be the most popular model the company has ever introduced.

**YOU SELL MORE BECAUSE...
YOU HAVE MORE TO SELL
WITH THE JOHN WOOD FULL LINE**

plus
GAS TABLE TOP

AUTOMATIC WATER HEATER



**MODERN DESIGN FOR
MODERN KITCHENS AND LAUNDRIES**

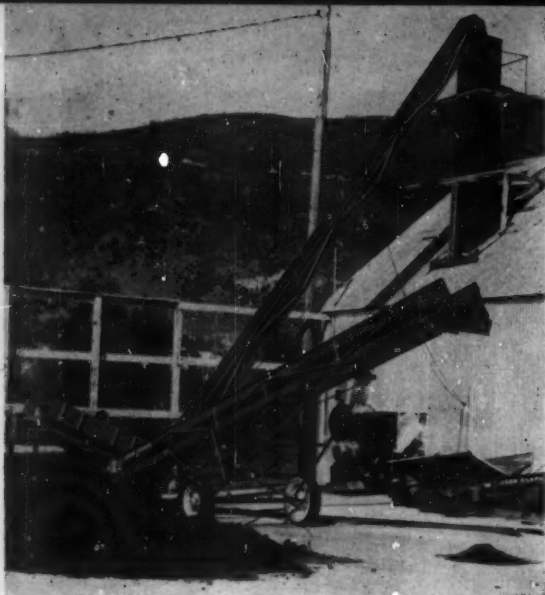
Compact automatic water heater with porcelain top. Easy to install—provides luxurious hot water service for homes where space is limited. Glasslined and galvanized—full warranty. John Wood Table Top gives you more opportunities for sales.

JOHN WOOD COMPANY

Heater and Tank Division

Conehoocken, Pennsylvania • Chicago, Illinois



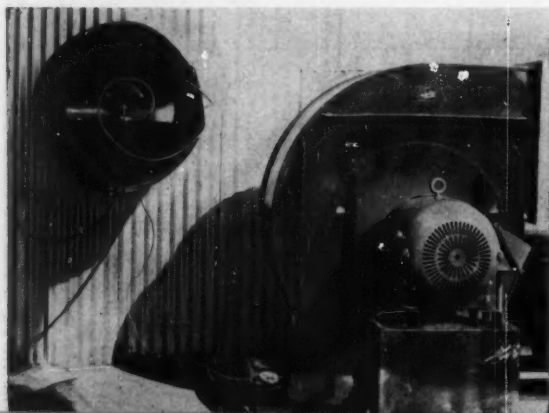


The 20-ft-high "silo" was still under construction when this photo was taken. The moss is carried to the top of the silo by the steeply-angled elevator, then drops down through a perforated shaft and is dried by heated air pulled through the shaft.

LPG-fired peat moss drying operation cuts freight costs 46 per cent

Below—This outside view shows the burner (left) and fan (right). The fan pulls air along a U-shaped path, entering at the burner and exiting at the fan.

Right—This inside view shows the "U" ducting. The burner may be partially seen at right, while the bottom of the silo is just visible at the top (arrows). Bags are filled in the vertical compartment in the foreground (arrows). Note control panel on ducting leading from burner.



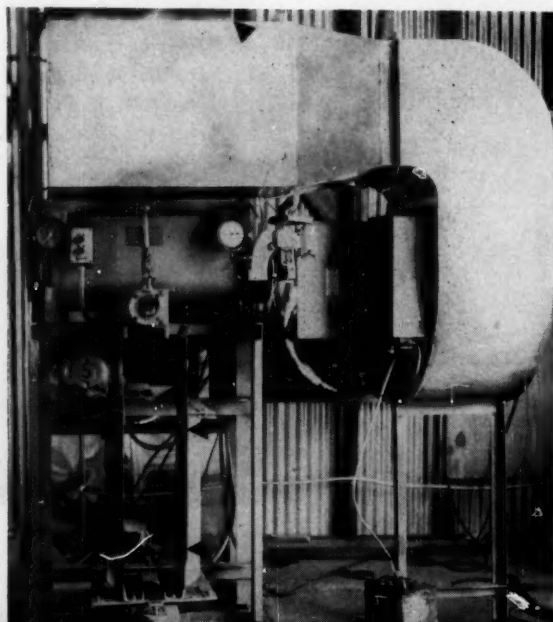
FIELD REPORT

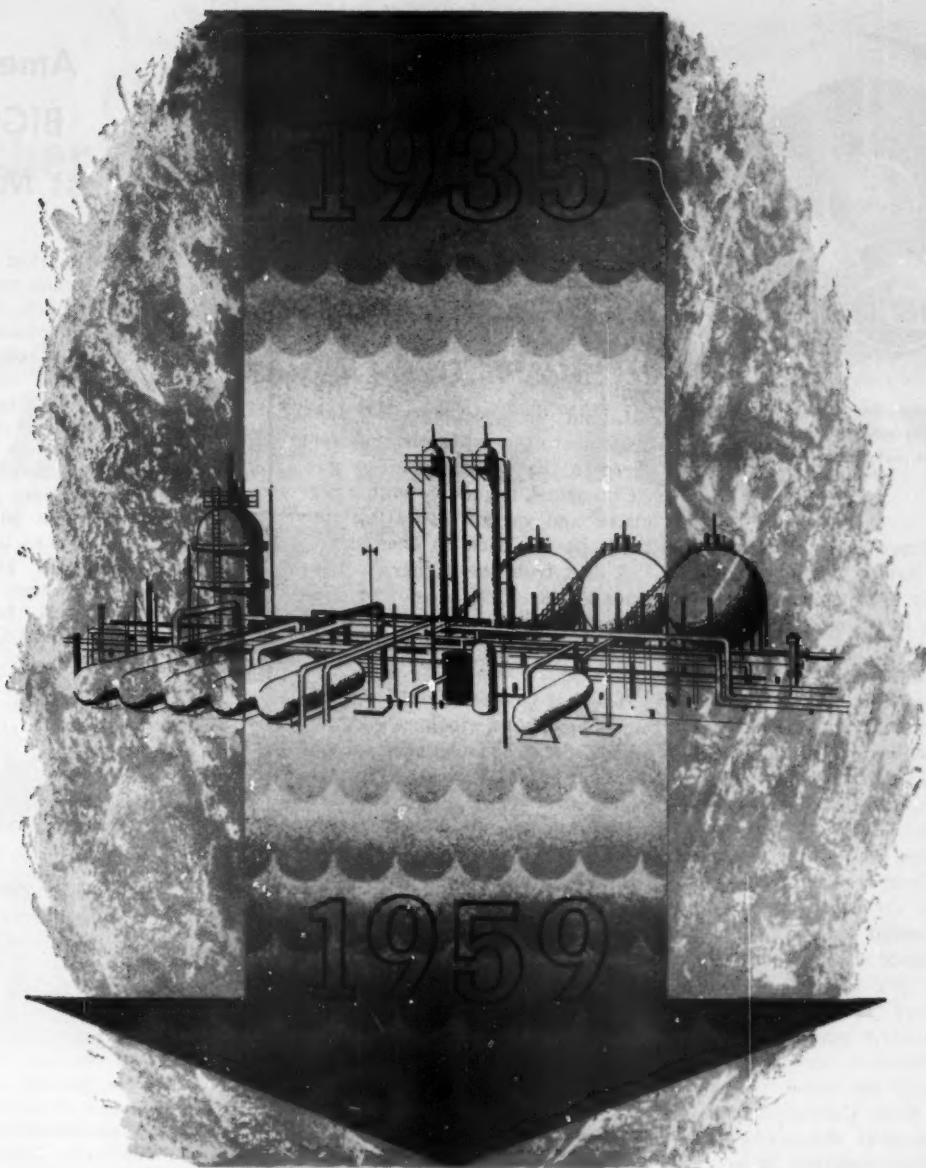
In these days of fighting the battle against excessive overhead on a penny-by-penny basis, any operation that cuts costs a whopping 46 per cent is NEWS — regardless of how limited the immediate application. There are not many peat moss processors in the nation, but there are hundreds —perhaps even thousands—of processing firms that could save shipping expenses by adding a drying operation.

J. ARTHUR THOMPSON

THE Royal Land Corp. processor of the Royal and B-Wise brands of peat moss, is saving an amazing 46 per cent on its freight costs—thanks to an LPG-fired drying process. Peat moss holds water so well that, even after extensive air drying, it still contains approximately 46 per cent water by weight. Gas drying steams out practically every last drop.

The site of this fabulous saving is the Royal Land Corp. peat moss processing plant at the foot of Smuggler Mountain, seven miles from Aspen, Colo. The entire in-





10...20...25 years without interruption...

Over 20% of Shell's LP Gas Distributors have been constant contract customers for Shell Propane—for ten to 25 years without interruption.

Year after year, Shell has maintained a 100% delivery record to all its propane customers. This achievement stems from one important policy:

Shell contracts to sell propane only within its capacity to produce.

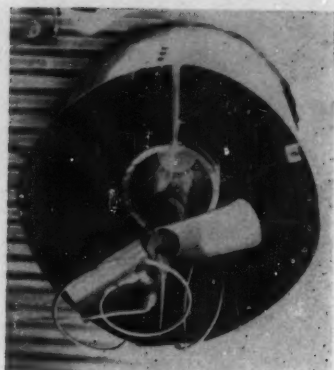
Let a Shell Representative show you why it pays to be a Shell Propane contract customer.



SHELL OIL COMPANY

Albany • Atlanta • Baltimore • Boston • Chicago • Cleveland • Detroit • Indianapolis • Los Angeles
Minneapolis • New Orleans • New York • Portland, Oregon • Sacramento • St. Louis • San Francisco • Seattle





The 30-in.-diameter, 6-ft long burner chamber shown in this exterior close-up can be adjusted to put out from 1 to 4 million Btu per hour.

stallation is new, substantial peat moss beds having been recently opened up on the mountain.

Peat moss is an extremely slow-growing (1 in. in 100 years!) plant found in certain, rather rare, moist areas. One of the best fertilizers and soil conditioners known, it contains a wide variety of beneficial soil bacteria and plant nutrients, plus the aforementioned ability to retain water.

At the moss beds, the material is stripped from the bog, shredded, and piled to air dry. Later these piles are loaded on trucks and hauled to the processing plant for further air drying and eventual processing and packaging.

After extensive air drying, the moss still contains approximately 1 gal. of water per cubic foot, according to Mike Carrasco, president and general manager. If shipped in this condition, it would mean 8½ lb of water for each 10 lb of peat moss. So, L. P. gas is called upon to wring out the rest of the water.

The drying plant was designed, installed, and tested with the assistance of Gilbert W. Barringer, Glenwood Springs (Colo.) plant manager for Suburban Gas Co.

Essentially simple in design, the unit is similar to a crop drying installation. Peat moss is carried by a farm-type elevator to the top of a 20-ft.-high steel "silo," measuring approximately 24 x 30 in. Inside the silo, is an inner core of perforated steel through which the peat moss drops downward. A turbine-type fan draws heated air

through the moss at an estimated rate of 10,000 cfm.

The burner chamber is 30 in. in diameter and 6 ft long. It was designed and built by Barringer and incorporates an Agriquip vaporizer. A control panel built by Gilmore Tatge Manufacturing Co. is located in the building beside the bag packer, so he has all controls within easy reach. The burner is ignited by means of an automobile spark plug. Current is supplied by a storage battery through a spark coil.

Liquid propane flows at tank pressure to the vaporizer and from there to the control panel as gas. At the panel, it goes through a regulator and various operating controls, thence back to the burner.

A duct from the burner chamber leads to the silo. Via another duct, the fan draws heated air from the burner through the silo and the moss.

The entire operation has been made as safe and foolproof as possible. In addition to the usual cut-offs and safety valves, the control panel contains an air velocity safety switch and a thermo-couple safety switch. If either the flow of air through the burner chamber or the flame should fail, a solenoid cuts off the gas.

The drying unit will produce 1 to 4 million Btu per hour. The equipment is designed to extract 5 gal. of water per minute, operating at about 200 deg. F.

For economical operation, a humidistat with a modulating valve supplies the amount of heat needed, according to the water content of the particular batch of moss.

Full capacity operation burns approximately 40 gal. per hour. Fuel is supplied from a single 1000 gal. tank. Additional tanks or a larger one will be installed when needed.

Incidentally, the trucks used to bring the moss down the mountain are being converted to propane. Century carburetion will be installed by Suburban Gas. One of the big reasons for converting is to get a sealed fuel supply. Fine moss and dust can too easily get into the fuel tanks and lines of conventional fuel systems to raise havoc with engines. ■

America's BIGGEST Class Market

The farm market is America's biggest class market for petroleum products, home furnishings and appliances, automotive sales, farm production goods, and other consumer items.

That's the thesis of a series of seven booklets recently published by the State and Local Farm Papers, an organization of some 30 newspapers. Intended as basic marketing data for prospective advertisers, these booklets contain several facts that should be of great interest to LPG dealers.

Big in income, the farm market is currently enjoying its highest level since 1953. At \$34.3 billion, it's 19 per cent above 1957. Put another way, it's more than the combined total of seven of the nation's very biggest companies.

Big in assets, the farm market's net worth is growing at an enormous rate, more than one-quarter billion dollars per year! The total is now \$168.2 billion, or more than the combined total of the nation's top 500 industrial firms!

Big in people, the farm market has more people than any other industry. Its five million farm families total 22,257,000 people!

For petroleum products, the farm market spends \$2 billion every year!

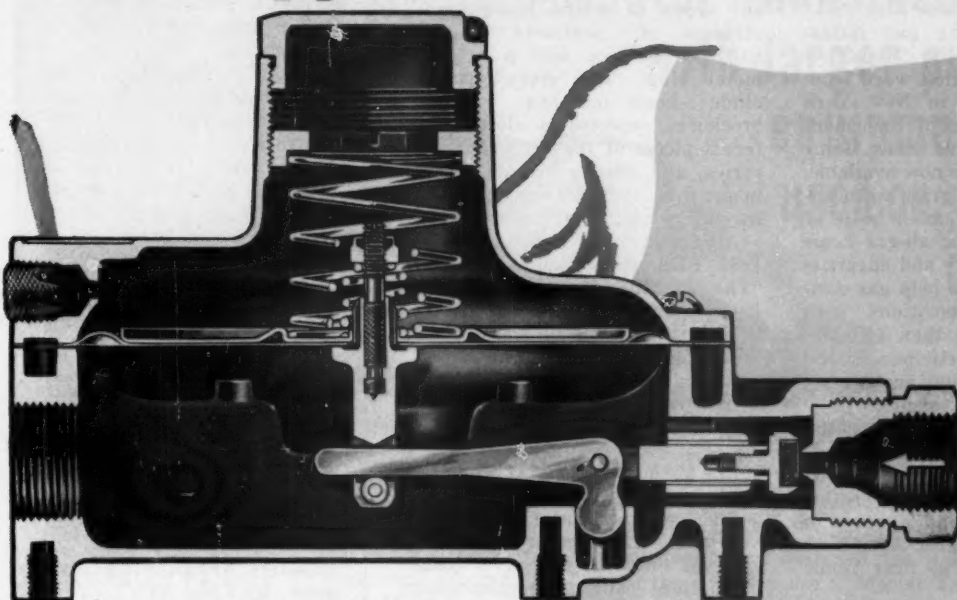
For home furnishings and appliances, the farm market spends \$1 billion each year!

For cars and trucks, the farm market spends \$1.5 billion per year. This includes 400,000 to 500,000 new cars per year. For spark plugs alone, this market spends a whopping \$20.3 million.

For farm production goods, the farm market spends \$15.7 billion per year. On a typical 240 acre midwest farm, for example, the investment for farm equipment may run as high as \$25,000 to \$35,000!

**Fisher Built especially for the tank
installation of 1000 gallon
capacity or less**

The Type 932 HUSKY



**SELECTION CHART FOR TYPE 932 SINGLE STAGE OR SECOND
STAGE FISHER LP-GAS REGULATOR**

Stage	Catalog No.	Inlet Conn.	Outlet Conn.	Orifice Size	Setting Press.		Vent	
					Inlet	Outlet*	Style	Position
Single	932-1	POL	¼" F. NPT	¼"	75 psi	11" W.C.	Screen Tapped ¼" NPT	Over Outlet
Second	932-1	½" F. NPT	¼" F. NPT	¼"	10 psi	11" W.C.	Screen Tapped ¼" NPT	Over Outlet
Second	932-1	½" F. NPT	¼" F. NPT	¼"	10 psi	11" W.C.	Screen Tapped ¼" NPT	Over Inlet
Second	932-4	¼" F. NPT	¼" F. NPT	¼"	10 psi	11" W.C.	Screen Tapped ¼" NPT	Over Inlet

* Adjustable from 9" to 13" W. C.

Good name for this Fisher Tank Regulator. It's a rugged one. No similar size regulator on the market can match its capacity and performance. Handles all tank loads up to and including 1000 gallon installations. Adaptable to single or second stage regulation. Each one is individually tested for flow, regulation, lock-up and leakage. Write for a Fisher Bulletin on the Type 932 Husky.



IF IT FLOWS THROUGH PIPE ANYWHERE IN THE WORLD... CHANCES ARE IT'S CONTROLLED BY



FISHER GOVERNOR COMPANY Marshalltown, Iowa SINCE 1880

news



Blue Star Home Program open to LPG men, 1960 Plan Book out, AGA announces

LPG dealers are welcome to participate in AGA's Blue Star Home Program, the gas industries' answer to the Medallion Home. Along with that word from AGA headquarters in New York came the announcement that more than two dozen Blue Star Home promotion pieces are now available.

Details of the program were announced in the November issue of BPN. Promoting the all-gas home via national publicity and advertising, it is designed to help gas companies develop promotions with local builders. More than 50 utilities are already participating and nearly three times that number are expected to do so by spring.

LPG dealers can cash in on the AGA's customer-conditioning efforts by working out promotions with their local builders. Interested dealers can send 90 cents to the AGA, 420 Lexington Ave., New York 17, for the Blue Star Home Promotion Kit.

Material described in the kit can either be used: to advertise the promotion or, as giveaways, to spark it. For advertising, dealers can buy at cost: newspaper electros and reproduction proofs, three different types of bus and truck cards, window and counter

cards, direction signs, two different types of model home signs, strings of pennants, decals, badges, stickers, and a postage meter slug. The giveaways include: book matches, balloons, brochures, aprons, a dozen different pieces of jewelry and accessories, and even a bronze disc to insert into the front walk or driveway or to use as a paper weight.

Also available now is AGA's 1960 Plan Book, which outlines "The Gas Industry's Advertising, Promotion, and Merchandising Program." Theme of the book is "Look What Gas Is Doing Now!" LPG dealers not familiar with the wealth of material AGA puts out to promote gas and gas appliances might do well to follow the advice of the theme and look at what the AGA is doing.

Since all this material is available to the LPG dealer at cost, he can not only fill his advertising, promotion and merchandising needs at very low cost, but he can also reap a tremendous bonus by tying in with AGA's huge national promotions.

The wide range of available material can be seen in the Plan Book. Dealers can obtain a copy by sending \$2 to the AGA.

Interstate Petroleum announces plans for new gas terminal

Interstate Petroleum Corp., a new Tennessee firm, has announced plans to construct an L. P. gas terminal on the west side of the Mississippi River, at West Memphis.

The terminal, with a capacity of 50,000 bbl, will serve truck, rail and river barges. It will store gas piped from Oklahoma to West Memphis via the Oklahoma-Mis-

issippi River Products line. A 30,000 bbl terminal will also be constructed at Duncan, Okla., as a staging terminal for pipeline transmission to the Memphis area.

Construction of the two facilities will amount to approximately \$2.5 million. They are expected to be completed by June, 1960. Officers of the new corporation are: C. Dean Moss, president; Harry H. Luttrell, vice president, and James R. Winchester, secretary. All three are residents of Memphis.

Can isolated terminals be organized together?

Can bulk plant employees scattered at terminals hundreds of miles apart band together to organize a union? "Yes" says the National Labor Relations Board in a ruling made in mid-October. The decision came in a case involving Arrow Gas Corp. Roswell, N. M., and Chauffeurs, Teamsters & Helpers, Local 492.

The union attempted to organize a unit of truckdrivers, mechanics, mechanics' helpers, lubricators, tiremen, and washrack men employed at Arrow terminals in Roswell, Gallup and Portales, all in New Mexico.

Since the three facilities are from 90 to 350 miles apart, the employer contended that lumping them together in one union unit is inappropriate. While the employees have similar duties and working conditions, there is little or no interchange and few transfers among the terminals. At one terminal there was only one employee, a combination driver-service-man who dispatched by phone.

Net result of the NLRB hearing was a ruling that an election be held "as early as possible" so employees can decide "whether or not they desire to be represented, for collective bargaining purposes, by Local 492."

LPGA launches first Miss International L. P. Gas Contest

At a recent board meeting of the LPGA plans for the first Miss International L. P. Gas Contest were confirmed. Because of the time element this year's contest will probably not be nationwide. However, each state is invited to stage its own contest and do as much as it can toward getting a representative in this year's judging.

The contest is geared to education and interest in the home, farm or business world. A 500-word essay on some use of L. P. gas is the factor that will decide who becomes Miss International L. P. Gas and wins the \$1000 cash prize and trip to the annual con-

Now **MASTER TANKS** are filled **FASTER**



Master Tanks keep pace
with larger pumping
equipment now
used on propane
delivery
trucks

Now, all domestic tanks produced by Master Tank & Welding, Dallas, Texas, and Quincy, Illinois, will feature a new Multi-Valve® with a separate fill valve. This allows a much faster filling rate than any current Multi-Valve®.

This system utilizes splash filling, which creates a refrigerated condition and reduces the vapor pressure. Then tank can be filled without using a vapor return hose. Also, the direct flow on the separate fill valve cuts friction to a minimum

and reduces the strain on the truck pump. Rego engineers, in conjunction with Master engineers, have designed this new Multi-Valve® for the exclusive use of Master Tank & Welding. It cuts the time of each delivery stop and increases the number of calls each truck can make in a day. All this adds up to greater PROFITS. Another improvement has been to add a check lock to the bottom of the tank for liquid withdrawal.



MASTERPIECES OF
STEEL FABRICATION



2000 S. Front St. • Quincy, Illinois • Baldwin 3-5014
P. O. Box 5146 • Dallas, Texas • Riverside 7-2441



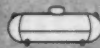
TRANSPORTS



TANK TRUCKS



STORAGE



DOMESTIC



FILLING STATIONS



FARM CARTS



REFINERY



LINE PIPE

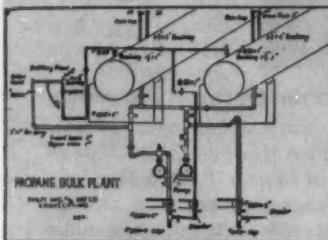
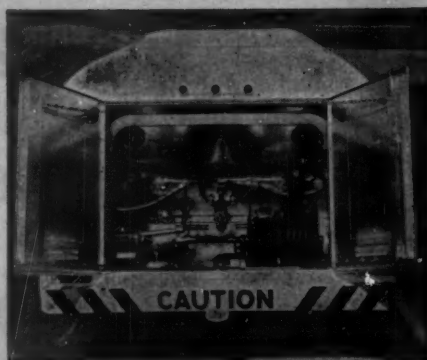
**Your One Supplier with everything in L. P. gas
and Anhydrous Ammonia Equipment**



"The Loadmaster" LPG Truck Tank



PASLEY-DESIGNED Truck Tanks (see above and right) were first to feature all controls from one location. All operation is from one point—rear compartment.



BULK PLANTS Pasley LPG and Ammonia type installations—a turnkey job or engineering for your own installation. Write, wire or call.

Also a complete line of accessory equipment.

"Pastels By Pasley"

COLOR—The Modern Trend! Bring your LPG Equipment up to date. Available in the following colors . . . (write for information)

Blush Peach	Smoky Grey
Sunshine Yellow	Seafoam Blue
Mustard Lime	Wedgewood Green
Eureka Orchid	Rose Beige
Lake Blue	Desert Rose



EVERYTHING IN LPG AND ANHYDROUS AMMONIA

The Pasley Mfg. & Dist. Co.

631 East 11th Street • Kansas City, Mo. • Tel. Victor 2-2369

vention and trade show in Chicago on May 1-4.

The contest will be nation-wide. L. P. gas marketers and associations—whether or not they are affiliated with LPGA—may stage their own local contests. Winners of these competitions will be entered in the national judging. In addition, girls may enter the national competition directly by mailing their essays to the Chicago office of LPGA.

The essay must describe some occasion in which the girl used L. P. gas. This may center around any application, whatsoever, of the use of LPG.

Entry qualifications are few. The girl in the 16-to-21 age bracket must be a U. S. or Canadian resident and unmarried. She must be a member of a family using L. P. gas or be a student in a school using L. P. gas or an attendant or employee or member of some institution, club or church which uses L. P. gas. There is nothing to buy or any other commercial aspect of this contest.

Employees of L. P. gas firms—marketing or supplying—and of trade associations in the industry may not enter. The contest is closed also to professional food workers, home economists and home economics teachers.

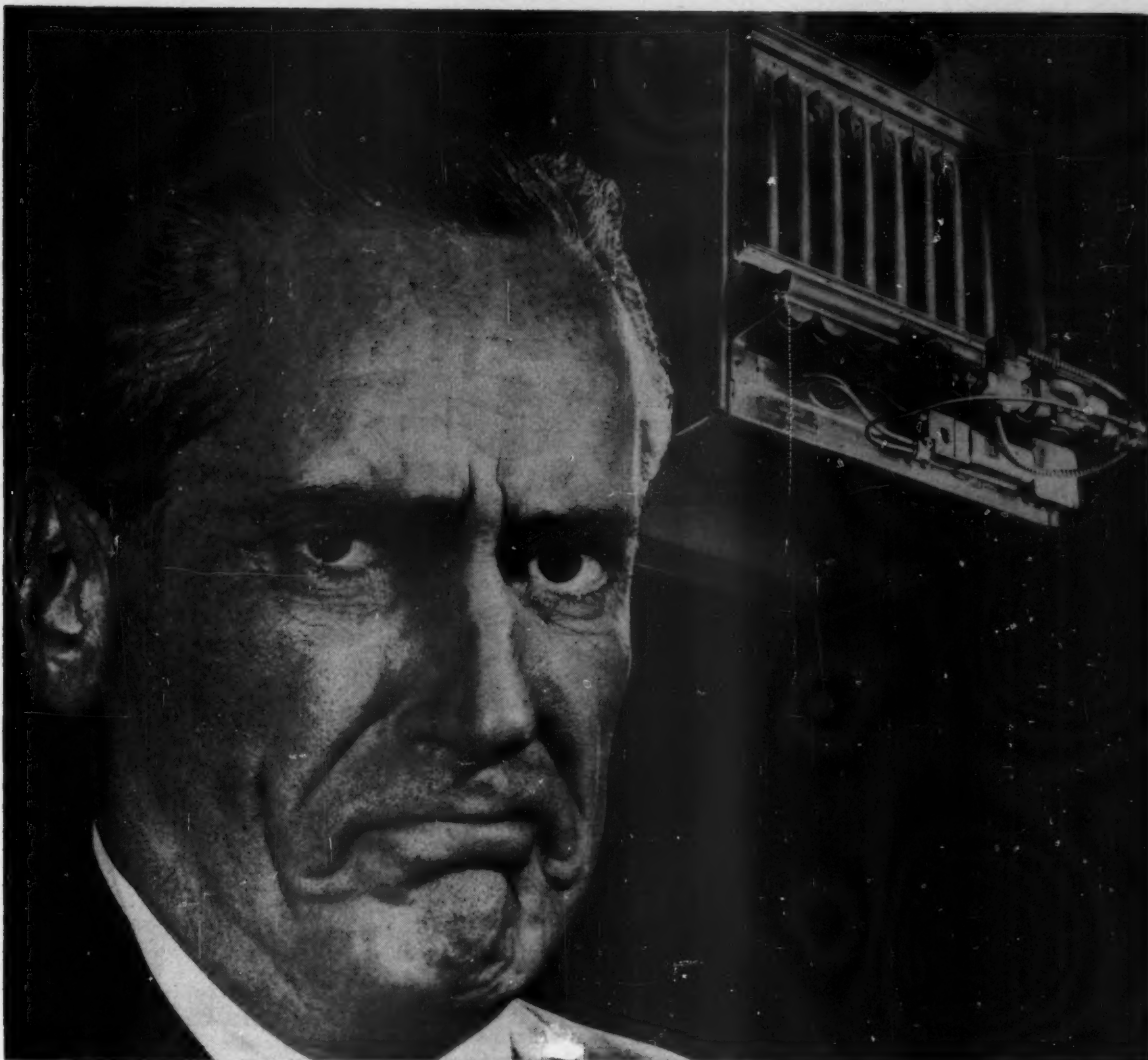
In her entry blank the contestant will show her parents' consent and a statement from a reputable person attesting to the fact that her essay is her own work and based on a true happening.

The LPGA is providing uniform entry blanks which local contest sponsors may reproduce for their own publicity planning. Contest sponsors must agree to abide by LPGA rules and policies; apart from that there are no fees or other obligations. In a mailing to members and trade groups, LPGA is offering suggestions on how to run local contests and art work to help illustrate publicity material.

Petrolane's 6 month profits up 28 per cent from a year ago

Several indications of continued expansion within Petrolane Gas Service Inc.'s organization make the news again this month.

On October 1, it was announced that Petrolane bought the assets of Meadow Creek Gas Co. in Casper, Wyo. This brings Petrolane's total plants to 126 and gives them a total of 75,000 customers in 10 Western states and Alaska.



TOUGH BUYERS

DEMAND REZNOR STAINLESS STEEL DUCT FURNACES

BECAUSE THE HEAT EXCHANGER AND BURNERS CANNOT CORRODE!

The plumbing, heating or air conditioning contractor has to be a tough buyer. He has to look ahead and consider possible trouble makers like corrosion in air conditioning, make-up or ventilation air systems. That's why so many contractors demand Reznor stainless steel duct furnaces: they can't corrode!

LOWER FUEL COSTS, TOO —The tough buyer wants to make sure his customers get even heat and lower fuel costs. That's why he appreciates Reznor "extras," like the gas modulating

valve. As discharge temperatures rise, the valve cuts gas input to 20% of rated capacity, then shuts off the supply completely.

CHECK THE "TOUGH BUYERS' LINE" You can order and install Reznor duct furnaces in capacities up to 300,000 Btu. Use them in multiples for greater heat requirements. Buy matching Reznor blowers.

For the full story, phone your local Reznor distributor, or write to Reznor Manufacturing Company, Dept. 4 B, Mercer, Pennsylvania.

THE HEATING WORLD IS FULL OF TOUGH BUYERS; THAT'S WHY REZNOR IS THE WORLD'S LARGEST SELLING DIRECT-FIRED HEATER!

REZNOR HEATERS

"THE TOUGH BUYERS' LINE"



Col. Willard F. Rockwell, (left), chairman of the board, Rockwell Manufacturing Co., receives a Freedoms Foundation "Honor Certificate Award" from Dr. Kenneth D. Wells, president, Freedoms Foundation at Valley Forge. The award was for "outstanding speeches and writings in the economic education field."

A statement of profits for the first six months of this year shows that through June 30 net profit amounted to \$493,925. This figure represents 95 cents a share on the 517,500 shares outstanding, a gain of 28 per cent from the same period a year ago. For the first six months of 1958, net profit was \$383,430 or 74 cents per share. Sales and other revenues for the first six months of 1959 totaled \$7,532,983 compared with \$4,907,281 for the same six months' period last year. This is an increase of 54 per cent.

Part of the increase is due to Petrolane's sales of gas for re-injection in the ground for miscible phase recovery of oil. However, 40 per cent of this gas will be recovered. The injected propane mixes with crude oil, allowing a much larger quantity of crude oil to be recovered.

The company expects to pour over 27 million gal. of propane into a hole in the ground near Coalinga, Calif., the site of one of the largest propane injection oil well projects ever undertaken. The project began on March 14 and over 20 million gal. have been injected. Petrolane is the only company supplying propane. Andrews Butane, a wholly-owned subsidiary buys, transports, and sells the propane to Union Oil Co. The rate of injection of propane has fluctuated from 18 to 20 loads to 8 to 10 loads per day. Pick-ups are from as many as 10 different sources. Much of the product is picked up in the Ventura area, a 7-hour, 240-mile haul.

Texas Eastern's underground storage terminal opened

Texas Eastern Transmission Corp. on October 14 began injection of propane into its Mont Belvieu, Texas, underground storage terminal.

The terminal, about 25 miles east of Houston, is the accumulation point used to gather large volumes of propane for shipment in Texas Eastern's Little Big Inch petroleum products pipeline to Todhunter Terminal, in Ohio. Todhunter is the company's giant underground L. P. gas storage area located about 30 miles north of Cincinnati.

The main injection valve at Mont Belvieu was opened by Willard K. Neptune, senior vice president in charge of Texas Eastern's Little Big Inch Division, and H. M. McDonald, vice president of the company and general manager of the Little Big Inch Division.

Initial capacity is 329,000 bbl, which will later be increased to 1 million bbl. Two other wells are to be developed with 1 million bbl capacity each. Other caverns will be developed as needed, Neptune said.

Want rain? Use propane!

The value of cloud-seeding to increase rainfall has been demonstrated "beyond any reasonable doubt" in a three-year experiment in California, a weather expert, Dr. Arnett S. Dennis, said.

Seeding was carried on each year of the three-year test from December 1 to March 15. Silver iodide crystals were dispersed from burners in which a solution of silver iodide and sodium iodide in acetone was burned in a propane flame. One burner was mounted on a plane. Others were on the ground.

During the experiment, Dr. Dennis said, rainfall in Santa Clara county ranged from 15 to 28 per cent over the expected rainfall. He said this was the equivalent of an increase of 11.65 in. over the whole target area, which included most of the agricultural land in the county.

The largest increase—28 per cent—occurred in 1958-59. That year the predicted rainfall was 12.69 in. and the actual rainfall was 16.27 in.

NEWS BRIEFS

Approval of a second contract with the Richfield Oil Corp. for oil and gas exploration and development in the Katalla-Yakataga area in Alaska was announced recently. This is the seventh development contract currently active in Alaska, including four which have been previously approved this year. More than 4 million acres under oil and gas lease or application are included in the seven areas, with a total of 12 companies involved or to participate ultimately.

Argentina has had shortages of bottled gas and has stepped up imports. The equivalent of 25,000 cylinders of propane was imported from the U. S. in the 4 month period ended August 31. Substantial amounts were also imported from Chile in the same period. Argentina has approximately 1.1 million consumers of gas, some using natural and some bottled.

One hundred years to the day Colonel Edwin Drake struck oil beneath the earth's surface near Titusville, Pa., miners at Shell Oil Co.'s Wood River, Ill., refinery reached a depth of 405 ft. in the largest single mined-type LPG storage cavern in the country. (See B-P News, August 1959, p. 74).

A revision of American Standard Safety Code for Powered Industrial Trucks, B56.1-1959, has been approved by the ASA and published by the ASME. The revision includes a new appendix on stability tests, which describes the construction and use of a tilting platform test device for industrial trucks. The revised standard, including the new appendix on stability testing, is available at \$1.50 a copy from the ASME, 29 West 39th St., New York 18, or from the ASA, 70 East 45th St., New York 17.

A full-sized 22 by 29 in. placard "Inspection And Maintenance of Dome Fittings of Liquefied Petroleum Gas Tank Cars Before, During and After Loading," is available at nominal cost from the LPGA, 11 So. LaSalle St., Chicago 3.





TEXACO DISTRIBUTORS GET DEPENDABLE SUPPLY IN THE MONTHS THEY NEED IT!

Use of LP-Gas is increasing rapidly, but Texaco Distributors are assured of dependable supplies *all the time*. That's because Texaco is one of the largest producers, and has a new fleet of tank cars for fast delivery.

Here's proof that teaming up with Texaco means a solid future: 683 distributors of Texaco products have been on the Texaco team for twenty years or more—many others for as

long as forty-five years.

5 reasons why it pays to be a Texaco LP-Gas Distributor

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2. Dependable and efficient delivery, in a new fleet of tank cars, from 25 strategically located production areas.
3. Immediate acceptance. Texaco LP-Gas is sold under the nationally-known,

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Portable Tristand Chain Vise



Here's a real time saver. Not only do you get a complete work-bench that's truly portable, but now you get a chain vise that's extra easy and fast to operate. Handle is right up on top where it's always handy. Handle and tightening nut are anchored to vise base . . . can't pull out.

Vise base, that overhangs front legs for clear tool swing, has hanger slots for tools, 3-size pipe bender, rear pipe rest and adjustable ceiling brace screw. Folding legs and integral tray set up easily and lock in position for rigid work base. Snap chain holds folded legs closed for easy carrying . . . no loose parts. Rubber grommets in tristand feet prevent creeping. See and try this more-for-your-money **RIGID** Top Screw Chain Vise at your Supply House!

New **RIGID** Bench Chain Vises have same Extra-Efficient Top-Screw Adjustment

5 Sizes for 1/4" to 8" Pipe,
Conduit or Rod



The Ridge Tool Company, Elyria, Ohio, U.S.A.

SUPPLIERS

Lundgren Motor Repair, Garden City, Kans., has been appointed a distributor for Century Gas Equipment, Marvel-Schebler Products Division, Borg-Warner Corp., Decatur, Ill. In cooperation with Dean Peterson, Century representative, an extensive field training program on all phases of L. P. gas carburetion will be initiated. Lee Bollinger will handle the program.

Among seven new vice presidents and ten directors elected at membership and board meetings of the American Management Association were two men connected with the L. P. gas industry. Paul B. Wishart, president, Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., was elected a vice president in charge of AMA's General Management Division. Walther H. Feldmann, president, Worthington Corp., Harrison, N. J., is one of the new directors elected for a three-year term.

Production in General Controls Co.'s newly integrated industrial instrument assembly section has begun in the firm's electronic controls division plant in Burbank, Calif. Unification of industrial instrument assembly units from other areas in the company's Glendale, Calif., and Burbank factory complex and from its Iron Mountain, Mich., plant, was completed without disturbing production or delivery schedules.

Auto & Aero Supply Co. Inc., Cincinnati, Ohio, has been appointed a distributor for Century Gas Equipment, Marvel-Schebler Products Division, Borg-Warner Corp., Decatur, Ill. Auto & Aero's L. P. gas carburetion territory will consist of portions of the states of Ohio, Kentucky and West Virginia.

American Meter Co. has bought the Granberg Corp., Oakland, Calif. The new subsidiary, founded in 1937, makes petroleum meters and pumps for tank trucks, bulk plants and pipelines. The move gives American a more complete line of measurement products and added service, particularly in refinery and pipeline operations.

Rockwell Manufacturing Co. has announced that it will build a new 150,000 sq ft addition to its plant at Pinneberg, West Germany, for the manufacture of liquid meters, valves and woodworking power tools for the European and world markets.



"Financing cylinder purchases with LINDE saved us money"

says John Rose, President, Propane Industrial Service, Willoughby, Ohio

"With the help of LINDE's financing plan, we were able to multiply our business several times in three years and we don't see a limit yet. Financing cylinder purchases with LINDE saved us more money than any other lease or purchase plan we ever heard of. It means we get the best cylinders at the lowest possible cost."

Mr. Rose has his largest investment in LINDE's PREST-O-LITE lift truck cylinders. Like all LINDE cylinders, they're built to last. One seam, not three, for light weight and high strength. Footring designed, constructed, and coated to prevent rust, and curled

for strength and protection. The handhole is curled, too, for a comfortable grip.

Be sure to get the facts on how LINDE's Credit Plan can help you expand your business. Write Dept. BU-12, Linde Company, Division of Union Carbide Corporation, 30 East 42nd Street, New York 17, N. Y. In Canada: Linde Company, Division of Union Carbide Canada Limited.

"Linde", "Prest-O-Lite" and "Union Carbide" are registered trade marks of Union Carbide Corporation.

Linde





John Deere's 88 portable crop dryer in a demonstration of hay drying at the John Deere State Field Days held at Marshalltown, Iowa, Sept. 15 and 16. The four wagons under the cover contain random-stacked half-sized bales tossed in by a John Deere twine-tie baler with bale injector. The wagons are 7 ft deep and have wood-slatted sides and bottoms. The cover is nylon with a coating of vinyl plastic. The dryer has three air filters to permit efficient firing with L. P. gas.

Union Tank Car Co. recently announced the consolidation of two of its divisions in the plate fabricating field—Graver Tank & Manufacturing Co., East Chicago, Ind., and The Lang Co., Salt Lake City, Utah. The new division will retain the name of Graver Tank & Manufacturing Co., division of Union Tank Car Co. and will continue under the direction of Clark Root as president.

Newest acquisition of the Smithsonian Institute, a gift of Minneapolis-Honeywell's Brown Instrument Division, are early American-designed pyrometers developed by Edward Brown for measuring high temperatures of industrial processes. They were presented to the national museum by the inventor's son, Dr. Richard P. Brown, on behalf of the division named for him and his father.

The formation of General Controls Societe Anonyme (S.A.) at Fribourg, Switzerland, has been announced by General Controls Co., Glendale, Calif. The new subsidiary is designed to handle all international operations, except North American activities. Howard Bailey of Paris, France, has been chosen director and officer of General Controls S. A. He will work directly with Remy H. Ludwig, recently named director of the International Division.

Plumb Supply Co., Des Moines, Iowa, has announced that it is now the Central and Northern Iowa plumbing industry distributor for the Ruud Manufacturing Co., Kalamazoo, Mich. Plumb branches are maintained in Mason City, Fort Dodge and Storm Lake, Iowa.

For the second time in less than twelve months, Jamesbury Corp., Worcester, Mass., is expanding its total plant area. The newest addition will add 70 per cent to the plant's present floor space. An addition just recently completed provided five times more floor space than had been available.

The Banks Tank Co., Vicksburg, Miss., is offering a stock issue to residents of Mississippi Funds derived from the sale will be used to expand the shop and offices. Plans are to increase production.

Crane Co. of Chicago recently purchased all properties and assets of the Chapman Valve Manufacturing Co., located at Indian Orchard (Springfield), Mass. The sale price of \$11,197,377 was approximately book value, and included \$4,200,000 for the fixed assets. The plant, which will be known as the Chapman Valve Manufacturing Co., is a wholly-owned subsidiary of Crane Co. It will retain its present management and executive staff, headed by C. Goodwin Carter.

DEALERS

Both revenues and earnings of National Propane Corp. for the nine months ended Aug. 31, 1959, were the largest for such a period in the company's history. Gross revenues of \$14,077,800, compared with the previous record high of \$10,360,800 achieved in the corresponding period of the preceding fiscal year were reported.

Sales and earnings of Suburban Gas Service Inc., Pomona, Calif., for the first quarter of its current fiscal year substantially increased over the same period a year ago. Sales for the three months ended July 31, 1959 amounted to a record \$2,366,287 and net profit, also a record, totalled \$105,276. For the corresponding period in 1958, sales were \$1,730,802 and net profit totalled \$43,282.

Val Gas Corp. has opened a new branch office at 4000 Cerrillos Rd. in Santa Fe, N. M., with Jack R. Manning as manager. The new branch will offer a method of dispersing tanks which can be put on meters to customers, put out on loan, lease, or rental. The office will feature a complete line of appliances.

Petrolane personnel recently conducted an L. P. gas school for employees of the Yellowstone Park Co., the National Park Service and the U. S. Forestry Department.

Two of the 13 companies receiving the American Gas Association's Safety Achievement Awards handle L. P.



The "Go Beaird" program, which has just been launched by the J. B. Beaird Co., gets enthusiastic reception from Marcello Raide, Chilean visitor to the Shreveport, La., plant. Raide (center) is a Beaird distributor in Santiago. On hand to greet him were (left to right) Henry Mc-Lemore, manager of the industrial division of the Shreveport Chamber of Commerce, J. L. Tullis, Beaird president and general manager, Ralph Henderson, executive vice president, Shreveport Chamber of Commerce, and Richard Meisenbach, Beaird LPG manager.

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Tri County Gas opens the doors of its new home

Over 2000 guests joined the Tri County Gas Service at LaFayette, Ala., recently when it opened the doors of its new 19,000 sq ft building.

Before the doors closed on the last guest, eight hours later, 300 biscuits, 2 hams, 200 cups of coffee, hundreds of cookies, 20 gal. of lemonade and 120 doughnuts had been served to the thirsty and hungry crowds. Orchids were presented to the first 300 ladies to register, while 250 pencils and 150 wrought iron ash trays were given away.

Six guests won special prizes including a gas range, shallow well pump, two room heaters, one bathroom heater, and a picnic jug.

Entertainment featured Bill Pinion, the Phillips 66 clown. A showing of the film, "L. P. Gas at Work in Alabama," also attracted wide attention.

A special feature of the new location is the bottle-filling station which is separated from the main building by a fireproof wall. It is equipped with an explosive-proof switch next to the scales which operates an 850 gal. tank. A loading platform allows easier and safer handling of bottles.

gas. The awards were presented during the AGA's 41st annual convention at the Conrad Hilton Hotel, Chicago. With 100 or less employees, Wisconsin Southern Gas Co. Inc., Lake Geneva, Wis., had an accident-free record as did Gas Co. of Vermont Inc., Barre, Vt.

Even though the year ending May 31, 1959, was 28 per cent warmer as measured by degree days than the previous year, Southern Propane Co., Jesup, Ga., reports earnings before taxes of \$646,045 this year as compared with \$593,896 for the previous year. This represents an increase of approximately \$52,000. The June and July earnings before taxes for the current fiscal year were \$61,000 greater than the previous year. This increase was due to a tobacco curer sales program during which a large number of barns were converted to gas.

The board of directors of Diversa Inc. recently approved the acquisition by United Petroleum Gas Co. of Liquid Gas Co., headquartered at Corsicana, Texas. Diversa, headquartered at Dallas, Texas, is the parent company for United.

Bottled Gas Co. of Lynchburg (Va.) Inc. is building an 85-ft tower on a 28-acre site on Tobacco Row Mountain to give state coverage for Lynchburg area businesses with two-way radio systems. The firm is building the tower for its own offices but will lease space to 15 or 20 other firms. The system will be in operation by December 1 if the FCC approves the license application in time.

Andrews Butane Co., Petrolane's subsidiary responsible for the transportation and maintenance of long haul trucking equipment for its southern marketing area, has recently moved into modern new facilities at 1601 E. Victoria St., Compton, Calif. The main building is designed so a truck and trailer can drive in one end and out the other. Another unique feature of the depot is the fact that propane from an adjoining major refinery is piped directly into a 30,000 gal. tank located at one end of the 2-acre site.

Gaddis Propane Co., Arvada, Colo., has been incorporated listing \$55,000 capitalization.

Bob Bradley, former vice president of Texas Natural Gasoline Corp., has started a company of his own. Called Royal Gas Products, it is located in Room 226, Beacon Bldg., 45th and Boulder, Tulsa, Okla.

MERCHANDISING

A three-dimensional display in four colors for the Universal Model 8073-X promotional gas range is announced by Cribben & Sexton Co., Chicago. The 27 x 36 in. display headlines the range as "the gas range buy of the year," and features the \$55 savings plus the free rotisserie worth \$25. Dealers ordering the range receive the display plus posters, envelope stuffers, tie-in ads and other sales aids at no charge.

A detailed month-in-advance weather forecast is now available to farmers and business firms. The forecast spotlights temperature and precipitation for the coming month and includes more general information for the following two months. Weather maps, in color, indicate at a glance what sections are expected to be colder or warmer and wetter or drier than usual. The subscription price for the monthly "Weather Trends Bulletin" is \$36 a year. Further information can be obtained from Weather Trends Inc., 550 Fifth Ave., New York 36.

Two new 35 mm film-strips, in full color with professionally narrated recordings, are now available to add impact to any Gold Star range program. "What's the Big Idea?," runs for 14 minutes and is aimed specifically at dealers, dealer's salesmen, and company sales staffs. "The Gold Star in Your Future," is directed to the retail customer. It is also 14 minutes in length. For prices and special discount rates, write: Order Dept., American Gas Association, 420 Lexington Ave., New York 17.



Dri-Gas Co. and Mississippi Tank Co. officials stand in front of one of the largest L. P. gas transports ever built to operate in Illinois. The transport and four T-1 3075 wg bobtails were delivered recently to Dri-Gas. Built by Mississippi Tank, the huge transport has a capacity of 10,520 wg and carries a larger payload than a conventional L. P. gas railroad tank car. Constructed of T-1 steel, the unit was designed to take advantage of the new Illinois 72,000-lb gross weight law.

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BUILD LOADS — AL-110-LPG meters give your customers "utility-type service"... build the confidence that helps you sell more gas and gas appliances. Ideal for medium-sized homes with space heating and for small commercial loads.

MEASURE ACCURATELY — from pilot to full capacity loads. Precision engineered design includes grommet seals, self-lubricating bearings, plastic index box and reinforced flag rods. Bellows-type molded Duramic diaphragms designed to meet the requirements of LP-Gas services.

Rated capacity 110 cfm propane at 1/2-inch w.c. differential — 5 psi working pressure. Available with 3/8, 1/2 or 3/4-inch F.P.T. connections. Ask for Bulletin 307.

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CALENDAR

Coming events in the Industry

1959

December 1—Wisconsin LPGA Annual Meeting—East Side Businessmen's Association Club House, Madison, Wisc.

December 1-4 — National Warm Air Heating & Air Conditioning Association Annual Convention—Chase Hotel, St. Louis, Mo.

December 14—Iowa L. P. Gas Industry Conference—Kirkwood Hotel, Des Moines, Iowa.

1960

January 11-16 — Gas Display, Pennsylvania Farm Show—Harrisburg, Pa.

January 17-19—Michigan LPGA 13th Annual Convention and Trade Show—Pantlind Hotel, Grand Rapids, Mich.

January 18-22—NFPA Committee Meetings—Hotel Manhattan, New York.

February 1-4 — American Society of Heating Refrigerating & Air Conditioning Engineers Semi-annual Meeting — Memorial Auditorium, Dallas, Texas.

February 3-5—L. P. Gas Motor Fuel Service and Installation Clinic—State Farm Show, Harrisburg, Pa.

February 11—New Jersey LPGA Convention—Colony Motel, Atlantic City, N. J.

February 25-26—Eastern Canada District LPGA Convention and Trade Show—Lord Simcoe Hotel, Toronto, Ont.

March 6-8—Indiana LPGA Convention and Trade Show—Claypool Hotel, Indianapolis, Ind.

March 28-30—Southeast District LPGA Convention and Trade Show—Atlanta Biltmore Hotel, Atlanta, Ga.

March 28-29—Iowa LPGA Convention—Kirkwood Hotel, Des Moines, Iowa.

April 2-3—Western Canada LPGA Annual Meeting—Calgary.

April 24-25—Association of Nebraska LPG Dealers Annual Convention—Castle Hotel, Omaha, Neb.

May 1-4—National LPGA Convention and Trade Show—Conrad Hilton Hotel, Chicago.

May 16-20—NFPA Annual Meeting—Hotel Queen Elizabeth, Montreal, Que.

May 22-25—Industrial Heating Equipment Association Inc. Annual Convention—The Homestead, Hot Springs, Va.

May 29-31—Mid-South District LPGA Convention and Trade Show—Peabody Hotel, Memphis, Tenn. (Arkansas and Tennessee will hold their annual state meetings during this convention).

June 2-3—Institute of Appliance Manufacturers Convention—Netherland Hilton Hotel, Cincinnati, Ohio.

June 13-15—American Society of Heating Refrigerating & Air Conditioning Engineers Annual Meeting—Vancouver, B. C., Canada.

June 16-18—Western Liquid Gas Association Convention and Trade Show—Statler Hotel, Los Angeles, Calif.

August 21-23—Idaho, Nevada, Utah Tri-state Convention and Trade Show—Shore Lodge, McCall, Idaho.

All associations are invited to send in dates of their forthcoming meetings for this calendar.

Season's Greetings

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Statement required by the Act of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233) showing the ownership, management, and circulation of BUTANE - PROPANE News, published monthly at Philadelphia, Pa., for December, 1959.

1. The names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, Frank M. Chapman, 198 S. Alvarado St., Los Angeles 57, Calif.

Editor, William W. Clark, 198 S. Alvarado St., Los Angeles 57, Calif.

Managing Editor, Robert J. Clay, 198 S. Alvarado St., Los Angeles 57, Calif.

Business Manager, Frank M. Chapman, same.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.)

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Holders of more than 1 per cent of the capital stock outstanding of Chilton Company: Mary M. Acton, 260 Sycamore Avenue, Merion Station, Pa.; Mrs. Beulah Fahrendorf, Chateau LaFayette, Scarsdale, New York; Dorothy S. Johnson, Route 1, Putnam Valley, New York; Kimberton Hills Farms, Inc., 1608 Walnut Street, Philadelphia, Pa.; Mabel P. Myrin, 1608 Walnut Street, Philadelphia, Pa.; Mary M. Acton, Trustee U/W of Clarence A. Muselman, Deceased, c/o R. F. Irwin, Jr., 2318 Packard Bldg., Philadelphia 2, Pa.; Beneficiaries: Mary M. Acton and David Acton; J. Howard Pew, 1608 Walnut Street, Philadelphia, Pa.; J. N. Pew, Jr., 1608 Walnut Street, Philadelphia, Pa.; Mary Ethel Pew, 1608 Walnut Street, Philadelphia, Pa.; Alberta C. Sly, 415 East 52nd Street, New York 22, New York; Alberta C. Sly, Executrix U/W of Frederick S. Sly, Deceased, 415 East 52nd Street, New York, New York; Beneficiaries: Albert C. Sly, Alberta C. Sly, and John E. Sly; Soleil Farms, Inc., 1608 Walnut Street, Philadelphia, Pa.; Charlotte M. Terhune, 160 E. 48th Street, New York, New York.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semi-weekly, and triweekly newspapers only.)

FRANK M. CHAPMAN, Publisher

Sworn to and subscribed before me this 1st day of October, 1959.

James E. Granbery

(My commission expires February 10, 1961.)

[Seal]

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ASSOCIATIONS

Political action speech highlight of Northeast LPGA Convention-Trade Show

THE Fifth Annual Northeast LPGA Convention and Trade Show held in October in Washington, D. C., had more than its share of interesting and dynamic speakers. Delegates were figuratively blasted from their chairs by a booming, bombastic E. Carl Sorby as he preached the promise of the "Golden Sixties." They were deeply impressed by the simple tale told by Dr. Walter O. Snelling and his discovery of LPG. And tears of mirth rolled down the cheeks of some as Tarheel philosopher Edmund H. Harding told how "Columbus Didn't Have No Gas."

But the speaker who drew the most rapt attention from the 1,000 assembled members and guests was Walter Petravage of the U. S. Chamber of Commerce. He urged the LPG men to participate in a political participation program that the C. of C. recently made available.

The program consists of nine two-hour workshops, which should have 12 to 20 participants and be conducted by a discussion leader. The discussion leader's manual and sets of workshop pamphlets are available from the Business Relations Dept. of the U. S. C. of C.

A "must" for every businessman, both large and small—this is an

action course in practical politics. Too many of our independent businessmen look upon politics much the same as the weather: Everyone talks about it, but nobody does anything about it. The nine workshops in this course tell you HOW to do something about the politics which means so much to your business operations.

The workshops cover:

1. The Individual in Politics—a discussion of the political participation opportunities available to the individual.

2. Political Party Organization—the why and how of organizations, with particular emphasis on the structure of political parties in your own community, county and state.

3. The Political Precinct—a way to get started in politics; the precinct leader's and workers' role.

4. The Political Campaign—how it is organized and run; how to get your vote out, influence the undecided, raise money. Here, Petravage explained "saints, saveables and the sinners." The "saints" will always vote your way and you should not waste time trying to influence them. The "saveables" are the waverers, the undecided; these are the people you should try to convince. The "sinners" are

those who will always vote against your party, so you should not waste any time on them.

5. Political clubs—their types, activities, and their relationship to the party organization.

6. The Political Leader's Problems—selecting qualified candidates who can win; financing; intra-party problems, etc.

7. Political Meetings—how to plan, conduct, and follow through.

8. Businessmen in Politics—what business firms, associations and chambers of commerce can do—and are doing—to increase the number and effectiveness of businessmen in politics.

9. The Politicians Speak—local, county and state politicians discuss practical politics; participants question them to get further information on local politics.

The course, which is non-partisan, uses the case-study method of training. All workshops are conducted as discussions. Petravage warned of one occupational hazard. Experience has shown that some businessmen become so vitally embroiled in this course that they find themselves running for office!

Petravage concluded his talk with the wise words of Teddy Roosevelt: "If you don't like what the governments are doing, either get into politics or quit complaining about politicians."

During the course of the convention, the New England LPGA and the Virginia LP-Bottled Gas Association also held their annual meetings, as did Maryland.

The New Englanders elected Al Thomas as their new president; Henry Merrill, first vice president; Sterling Nelson, second vice president; Harry Shook, secretary and Scotty Hilton as treasurer.

At the Virginia meeting, Richard A. Saunders was elected president; R. F. Pecht, first vice-president; J. Gilliam Conrad, Jr., second vice president; and Felix Dodd, secretary-treasurer.



Erwin Kleinmann, Dearborn Stove Co. vice president, addresses a luncheon session at Washington's Sheraton-Park Hotel during the recent Northeast LPGA Convention and Trade Show. His subject: the LP-Gas Council.

LPGA board makes Pamphlet 58 revisions at its fall meeting

A number of important revisions to Pamphlet 58 were proposed and approved at the fall meeting of the LPGA board of directors, held in Washington, D. C., in October. Among subjects covered:

- The location of relief valves.
 - Inconsistencies in Pamphlet 58 would be clarified by the revisions.
 - Fencing around LPG facilities.
- The proposed change would eliminate the designation "manproof,"



Newly elected officers of the Illinois LPGA are (left to right): Lynden G. Williams, LaSalle Bettergas Co., secretary-treasurer; Len E. Nyberg, Western Propane Co., president; and Ken Worland, Rockford Propane Co., vice president.

which is "virtually impossible to build and, if one were constructed, it would present a serious hazard to those inside," in the words of the T & S Committee.

- Truck transportation of cylinders and portable tanks. Revision of Division III, "Truck Transportation of Liquefied Petroleum Gases," was recommended so it would cover such tanks.

- Storage of containers awaiting use or resale. A complete revision of Division V covering this subject was proposed.

- Labeling of containers. Positive action to avert the inclusion of mandatory ("and unnecessary and inappropriate") labeling provisions in laws pending before state and federal lawmaking bodies.

- The use of LPG motor fuel on flammable liquid tank vehicles. The present wording of NFPA 385 prohibits this.

In other actions, the board decided to:

- Advise the American Standards Association that the use of appliance pressure regulators should not be made mandatory.

- Table for further study proposals for a chemical content standard.

- Refer to a conference committee, including in its membership appliance and mobile home manufacturers, certain proposed approval requirements for mobile home appliances.

The directors also voted in a new District 1 director to replace Walter J. Kraus, who has resigned. His replacement is W. J. Swick, Northwest Liquefied Gas Co., The Dalles, Ore.

Council sets plans for 1960; elects Carpenter its president

The National L-P Gas Council Board of Directors met during the recent Northeast LPGA Convention to formulate plans for 1960.

Elected to help carry out the new plans were president, Frank Carpenter, president of United Petroleum Gas Co., to succeed Frank DeVoe, manager of L. P. gas sales for Phillips Petroleum; chairman of the executive committee, Donald G. O'Meara, sales manager of Pyrofax Gas Corp.; and treasurer (re-elected), James F. Donnelly, Sr., assistant to the executive vice president of A. O. Smith Corp.

Beginning in the spring, the council's advertising and dealer sales aid program will kick-off with a new dealer sales aid promotion, "Demonstration Days." In late summer and fall the Council will sponsor its second annual "Win-A-Home" Sweepstakes. A total of 260,000 entries were recorded during the '59 contest. Total council budget approved by the board is \$526,000—an all time high.

The national "L. P. Gas Means Living Pleasure Everywhere" Sweepstakes promotion will again offer an all L. P. gas home as first prize. In addition, however, a minimum of 200 LPG appliances will be offered the winners in order to attract more consumer interest.

A "catchy" singing jingle will be used to popularize the modernity and "living pleasure" of L. P. gas.

These major advertising promotions will be supplemented by special "target" campaigns to cover

farm equipment dealers, builders, home economists, motel owners, and vocational-agricultural leaders. And, for the first time, council ads will be directed at the industrial fork truck market.

The Dealer Sales Aid Program will be increased with a budget increase from \$50,000 to \$91,000 for 1960. The DSA program will include new handout pieces, envelope stuffers, display cards, ad blow-ups, booklets, and reprints of consumer articles placed by the public relations staff.

The public relations program will be expanded to include a color motion picture on LPG domestic uses, and participation in a 200-station, nation-wide tv syndicated series, "Modern Home Digest."

Other council PR projects include production of news radio scripts for women's program and radio farm directors of 2806 radio stations; monthly newsletters to 2830 home demonstration agents; cartoon, photo, and news releases to all forms of printed media.

Outline for a special annual report to encourage greater interest in all council activities was presented and approved in the executive committee's report.

Special tribute was given E. Carl Sorby, 1958 council president, for his tireless work in behalf of the industry and the council itself. Salute was also made to Frank DeVoe, immediate past president and past executive committee chairman Frank Carpenter, for their tireless work and travel on behalf of the council's growing membership success.



At a press conference after the National Council's board meeting, newsmen question officers on new uses of L. P. gas. Left to right (seated), Frank Carpenter, president; Roy McGhee, UPI; Leigh Atkinson, council assistant managing director; Frank DeVoe, past president; Donald O'Meara, executive committee chairman; Dick Smith, McGraw-Hill Publications; and Leo Cary, council staff writer. On the extreme right (seated) are Charles Ten Eyck, Oil Daily, and James Donnelly, council treasurer. Standing is John Hartzell, the council's eastern representative and Logan Smiley, newly appointed western representative.

E. B. Murphy is WLGA's new managing director

Everett B. Murphy has been appointed managing director and new west coast secretary of the Western Liquid Gas Association. The appointment was effective November 1. He replaces the late A. L. Walters.

Prior to his present appointment Murphy was assistant secretary of the Cannery League of California. In this capacity he shared the responsibility for the general management of the association.

Before World War II he was em-

ployed by the American Petroleum Industries Committee, affiliated with the American Petroleum Institute with headquarters in New York City.

Missourians can win \$100 simply by spelling

The Missouri LPGA has come up with a unique contest for its 1959-60 membership drive. All a current member of the association has to do is be able to spell "Missouri LPGA."

That's right! Spell Missouri LPGA and win \$100.

Here's how it works. For every new active member signed up, the person signing him is credited with spelling one letter. For other memberships sold, the seller gets one letter spelled for every \$50 collected. However, both the number of members and the dollar volume cannot be counted.

In addition to the \$100 bill for spelling Missouri LPGA, three prizes will be awarded to the top three individuals bringing in new members in the active, associate and individual categories. First place is a set of golf clubs; second place, a Polaroid camera, and third place, fishing tackle.

Association Notes

Ninety members and guests attended the 11th fall meeting of the LPGA of New England Inc. Clark Jones of the NFPA presented a movie entitled "L. P. Gas Fire Control." It is an on-the-spot report of an outstanding fire-fighting job on an LPG tank fire in Arcadia, Calif.

In less than a month, 85 persons, representing 19 firms, had signed up for the Missouri LPGA's latest sponsored service to members—The Major Medical Expense Insurance Plan. Within just two weeks after the plan was announced, the minimum of 25 persons needed to put the plan into effect was far exceeded.

R. E. Turner, Green's Fuel of Florida Corp., Sarasota, was elected president of the Florida LPGA at its recent meeting in Miami Beach. The Golden Gate Hotel housed the 366 persons in attendance. Sidney E. Smith, Rural Gas Inc., Deland, was elected vice president and T. H. Slade, Jr., Slade Gas Co., Jacksonville, secretary-treasurer.

Members of the Ohio LPGA held their annual election meeting recently at Lincoln Lodge in Columbus. Elected to serve for the ensuing year are: president, C. Denver Lamp, Coshocton Gas & Appliance Co., Coshocton; vice president, Floyd E. Grabiell, Youngstown Propane Inc., Canfield; secretary, Paul M. Moyer, Ashland Oil & Refining Co., Marietta, and treasurer, Richard L. Mulligan, Mulligan & Johnson Propane Gas Service Inc., Fremont.

New Viking LP-Gas Pumps give...

STILL LONGER LIFE



The new *automatic pressure lubrication of Viking 28, 35, 70 and 90 G.P.M. LP-Gas pumps is another important step ahead in pumping efficiency. Liquid is automatically forced into bearing, regardless of pump rotation.

Add to Viking's exclusive new automatic pressure lubrication, these other Viking LP-Gas pump features...

- Positive thrust control for long pump life
- Leak proof O-ring gaskets
- Dry liquid-type mechanical seal for non-leak operation
- Automatic return-to-tank relief valve for quiet operation and greater pump capacity
- The original Viking "gear-within-a-gear" pump construction.

...and you have a combination that means still better and longer pump service for lower cost operation.

* Patent Pending

For complete information, write today for catalog HB



VIKING PUMP COMPANY

Cedar Falls, Iowa, U.S.A. In Canada, it's "ROTO-KING" Pumps

See Our File in Butane Propane Catalog

SUPPLIERS

W. THOMAS GETTIG, from assistant to the vice president of Rockwell Manufacturing Co.'s meter and valve division to vice president and general manager of LFM Manufacturing Co., a wholly-owned subsidiary of Rockwell.



W. T. Gettig
LFM Manufacturing



A. G. Pison
Robertshaw

ARGO G. PISON, from quality control engineer, supervisor and coordinator, General Electric Co., to manager of quality control, Bridgeport Thermostat Division, Robertshaw-Fulton Controls Co.

WILLIAM M. HUNT, from general sales and service representative to North Central territory sales representative for North and South Dakota, Missouri, Minnesota, Iowa, Nebraska and Kansas, Corken's Inc. **WILLIAM E. NELSON**, from sales manager and vice president, petrochemical, to special assignment of training and working with distributors and salesmen.

W. F. BURKE, from president, Red Bank Tire Co., to assistant distribution-service manager, Neptune Meter Co.'s liquid meter division.

WILLIAM LEONARD SWEARNGIN, from buyer in the natural gas liquids department, Phillips Petroleum Co., to manager of supply, Texas Natural Gasoline Corp.

JOHN W. NORTHCUTT, assistant vice president of Rockwell Manufacturing Co., has been named an advisor to the director of the Water & Sewerage Industry & Utilities Division, Business & Defense Services Administration, U. S. Department of Commerce. Northcutt comes to BDSA under an arrangement which makes executive personnel available for temporary government assignment without compensation.

IVAN J. LAUCIK, associated with the heating equipment business in Chicago since 1952, to Chicago representative for Motor Wheel Corp.

WILLIAM B. MAIER, from chief chemist to division superintendent, gas and gas products, Houston, Sinclair Oil & Gas Co. Maier succeeds **HENRY A. WITCHER**, appointed superintendent of operations in the general office, gas and gas products department, Tulsa, Okla.

CLAUD DUBOIS, from sales engineer in the southwest territory to sales manager, Century and Marvel L. P. gas carburetion equipment, Century Gas Equipment, Marvel-Schebler Products Division, Borg-Warner Corp.



Claud DuBois
Century



R. J. Davidson
Robertshaw

RALPH J. DAVIDSON, from sales representative to district sales manager, Pacific Southwest, Grayson Controls Division, Robertshaw-Fulton Controls Co.

L. GLENN RADER, from vice president and general sales manager to vice president and special sales representative, New Orleans area, Maloney-Crawford Tank & Manufacturing Co.

MILTON G. PECK, from vice president and director of sales and advertising, to chairman of the board, Pennsylvania Range Boiler Co.

CHARLES HERRIN, from account executive in the ten state western area consisting of Washington, Oregon, California, Idaho, Nevada, Wyoming, Montana, Colorado, Utah and Arizona, to sales manager, two-way radio products, for the same area, Motorola Communications & Electronics Inc.



A. L. SACHS, from staff engineer, Crane Co., to newly created position of chief product engineer and quality control director, A. Y. McDonald Manufacturing Co. **WILLIAM A. HEADLEE**, from branch manager, wholesale division, Rogers Brothers Seed Co., to manager, Kansas City, Mo., branch of A. Y. McDonald.

A. HENRY CASEY, from various executive capacities with several Siegler Corp. divisions, to newly appointed director of corporate public relations and advertising.



A. H. Casey
Siegler



E. W. Wenrich
Rockwell

EDWARD W. WENRICH, from assistant office manager to headquarters office manager for meter and valve and municipal and utility sales divisions, Rockwell Manufacturing Co. **CHARLES D. SCOTT**, supervisory staff assistant, power tool division, to headquarters office manager for that division. **EUGENE A. LEWICKI**, from supervisory staff assistant in the advertising department to headquarters office manager for the advertising and public relations department, serving all company divisions.

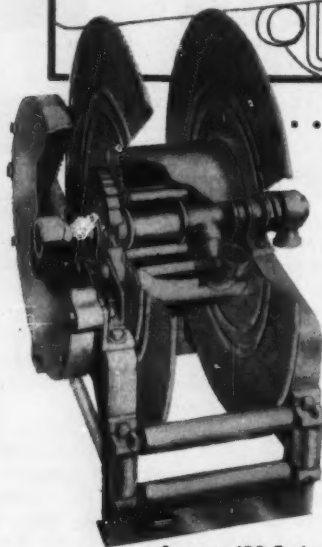
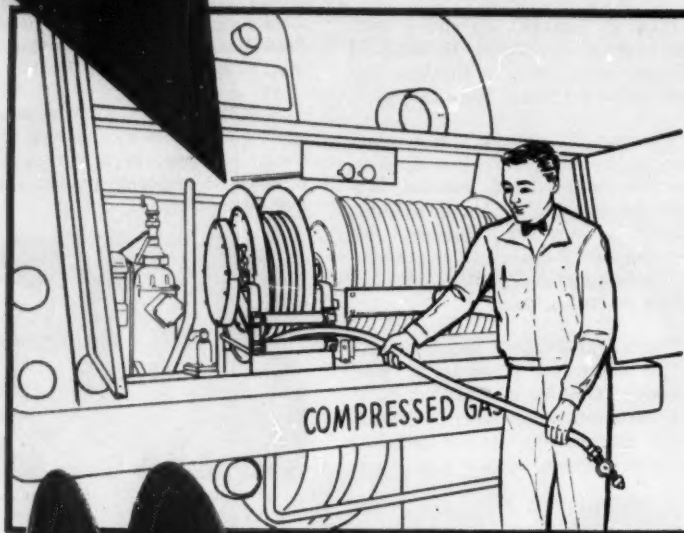
JACK KRAMER, from Pond-Johnston of Florida Inc. to industrial manager, Southeastern Natural Gas. **OLAN SMITH** to Pond-Johnston of Florida Inc. as sales representative for Georgia and North Florida. **CARL SILCOX** to sales representative for Florida peninsula and **LOUIS W. DEAN** to sales representative for Arkansas, East Oklahoma and Tennessee working out of Pond-Johnston of Texas Inc.

COLE H. PILCHER, from vice president, Sylvania Electric Products Inc., to vice president for industrial relations, ACF Industries Inc.

EDMUND W. DUGAN, from recently serving, on loan from Chemetron Corp., as assistant director of the General Industrial Equipment & Components Division of the Business & Defense Services Administration, U. S. Department of Commerce, to head Chemetron Corp.'s new Washington, D. C. office.

NEW

HANNAY SPRING REWIND REEL



... for vapor return line

Here's the answer to LP delivery where vapor return lines are used only part-time. Install a new Hannay spring rewind reel. Lightweight, compact, completely explosion proof and low in cost. Positive spring rewind power, full-flow hub assembly, and all of the construction features which have made Hannay the industry leader.

See your LPG Equipment Supplier or write direct for complete catalog.

Hose Reels by

HANNAY

CLIFFORD B. HANNAY & SON, INC., WESTERLO, NEW YORK

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Developments Each Month

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City Zone State

HAL COWLEY, a member of Ardmore Products' organization since 1945, to operations manager of the company.

K. F. EGAN has rejoined Wolverine Tube, Division of Calumet & Hecla Inc., as sales representative in the New York district.

WILLIAM J. MERCIER, from Dearborn Chemical Co. to sales engineer for Wisconsin and upper peninsula of Michigan, Wm. Powell Co. WILLIAM E. WELCH—from Ohio Injector Corp. to sales engineer for Colorado, Montana, Nevada, Utah and Wyoming. WILLIAM H. MARSHALL—from the Arabian American Oil Co. to sales engineer for San Francisco and central and upper California. H. ALTON PEARSON—from Catalytic Construction Co. to sales engineer for Philadelphia, Chester, and eastern Pennsylvania. DONALD O. PETTERSON—from Moorlane Co. to sales engineer for Oklahoma, Kansas and part of Missouri.

JACK R. ANDERSON, from regional claims manager with an insurance company to assistant vice president and general claims manager, Pan American Companies.

R. W. DORCAS, from division controller, Borg-Warner Corp., to newly-created position of corporate credit manager, Gar Wood Industries Inc.

MORRIS P. STILLINGER, from sales administrator, General Controls Co., to national sales manager, Deutsch Controls Corp.

DEALERS

CHARLES WEISS, from field marketing representative and manager of purchases to director of sales promotion and purchasing, Petrolane Gas Service Inc. W. A. COGLIZER—from positions in purchasing, advertising and sales promotion, to assistant to the director of sales promotion. EDWARD ALBERTONI—to manager of purchasing.



W. A. Coglizer
Petrolane



Charles Weiss
Petrolane



Edward Albertoni
Petrolane



W. J. Malchiodi
Protane Corp.

W. J. MALCHIODI, from manager of the eastern half of Protane's marketing area to manager of the newly formed domestic division, the Protane Corp.

DEATHS

W. I. WESTLAKE, president and co-founder of the Uregas Companies, passed away on October 1. He was 84 years old and had been in ill health for the past three years. Westlake, along with K. H. Dickson, and F. K. Westlake, his son, organized the Uregas Companies in 1941.



W. I. Westlake
Uregas Companies



J. I. Trimble
Surface Combustion

JOHN I. TRIMBLE, 54, vice president and general manager of the Janitrol Heating & Air Conditioning Division, Surface Combustion Corp., died suddenly, September 9, in Columbus, Ohio. He had been associated with Surface Combustion since 1928, when he joined the engineering department in Toledo. He became a vice president of the corporation in 1957, and was named general manager of the Janitrol Division in June of this year.

HOWARD M. JONES, chief engineer and assistant secretary, Armstrong Products Corp., died on Sept. 30. He had served Armstrong in many capacities for 54 years.

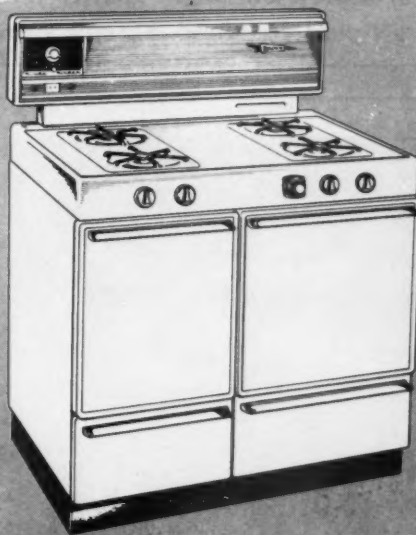
JOSEPH J. DELFAUSSE, chief engineer of Neptune Meter Co., died on October 7 after a long illness. He joined Neptune in 1934 as a student engineer and was progressively promoted to product engineer and assistant chief engineer. In October 1951, he was made chief engineer.

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GAS RANGES

YOU SEE QUALITY



AND . . .

Quality in a product means more than any other selling factor. The quality in BROWN Featuramic Gas Ranges is easily seen. The classic design, the outstanding features and the look of excellence all lend to the character of this product. For the finest in a quality range — look to BROWN.



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BROWN STOVE WORKS, INC.

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GENERAL L-P GAS TANKS

20 lb.—40 lb.—60 lb.—100 lb. Cylinders

Complete Line of Accessories for Single or Double Hook-ups . . . Regulators—Valves—Racks—etc. Everything that is needed for complete Bottle Gas Installation.

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WHAT'S

NEW

IN PRODUCTS AND TRADE LITERATURE

For further information on items reviewed in this section use the convenient post-paid Readers' Service Cards on pages 81, 82



Control system features modulating valve

Circle 1 on Readers' Service Card

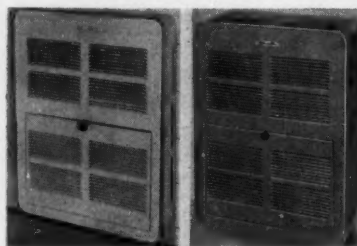
An expansion of Minneapolis-Honeywell's gas water heater control line has been made with the introduction of a new control system for commercial water heater units.

The control system features a newly-designed modulating valve (shown at left) which lights at low fire. Low fire ignition eliminates flame "roll-out" and modulation reduces stacking of water temperatures to a mini-

mum by sizing the burner flame to the demand for hot water.

A "flare pilot" provides for excellent ignition characteristics and pilot stability.

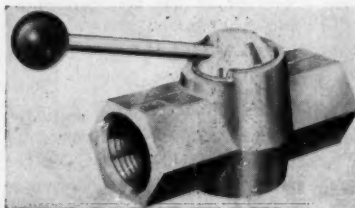
At the right is one of two liquid insertion thermostats used with the system which can be installed on both new and existing water heaters. It is designed for use with commercial gas water heaters in capacities up to 400,000 Btu.



Sealed gas heaters fasten directly to the wall

Circle 2 on Readers' Service Card

Two models of the "Brilliant Fire" Vent-O-Magic sealed gas heater are available from Ohio Foundry. Both are 10,000 Btu input and require no large vertical chimney. They do not sit out in the room, but fasten direct to the wall so no flue pipe is exposed. Flexibility of installation makes them suitable for walls up to 24 in. thick. They will heat approximately 1000 cu ft of space.

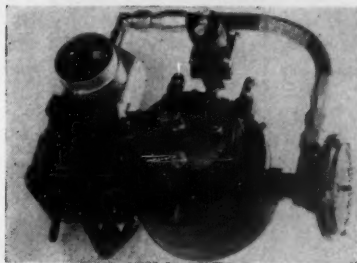


"O" rings in new plug valve give dead tight seal

Circle 3 on Readers' Service Card

The 9200 series brass plug valve, for pressures ranging from a full vacuum to 150 psi, and incorporating "O" rings to affect a dead tight seal, is now available from Circle

Seal Products. This plug valve can be used with all non-corrosive liquids or gases and is available in sizes from 1/8 to 3/4 in. female pipe. Aluminum or 303 stainless steel valves are available on special order.



Fuel injector system fits engines up to 650 cu in.

Circle 4 on Readers' Service Card

The McClain L. P. gas fuel injection system is available in sizes to fit engines from the smallest size up to 650 cu in. The equipment has been used to replace conventional LPG conversion systems in many locations for comparison tests by several large industrial plants and fleet owners. The system saves 22 to 35 per cent, according to the manufacturer. The equipment is offered to fleet owners of LPG-operated units for test and comparison analysis without obligation.



Burkay water heater adaptable to a variety of commercial uses

Circle 5 on Readers' Service Card

A recovery rate of 288 gal. an hour at 100 deg. rise is provided by the new Burkay 668 gas-fired water heater just added to the commercial line of A. O. Smith Corp. Fully approved for 180 deg. service, it has an input of 300,000 Btu an hour. In restaurants it may be installed as a straight recovery heater, a booster heater or part of a Burkay Booster Recovery or Shure-Temp

Booster Recovery system. It is also available as a swimming pool heater with self-generating controls and flow switch.



All valves and controls at rear of single-barrel tank

Circle 6 on Readers' Service Card

Pressed Steel's single-barrel truck is available in various capacities—with a size for every requirement. This light-weight unit is equipped with the simplified Hackney plumbing system that assures fast, safe handling of L. P. gas. Its features include location of all valves and controls at one easily accessible position at the rear of the truck, ICC lighting, and internal safety valves. A wide choice of optional equipment is available.



Washer-dryer combination cleans itself

Circle 7 on Readers' Service Card

A gas combination washer-dryer has been added to Norge's line. In the unit are such new-to-the-industry features as power cleaning that cleans the cylinder automatically after each wash and a self-cleaning lint filter, according to a Norge spokesman.

Automatic bookkeeping system announced

Circle 8 on Readers' Service Card

An automatic bookkeeping machine that is said to increase operating speeds by as much as 50 per cent has been announced by

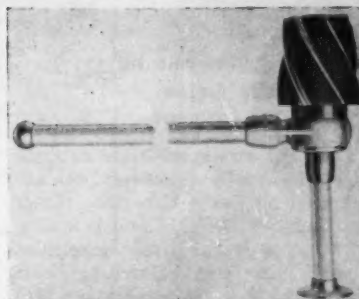
the Burroughs Co. The newly-developed line of accounting machines is equipped with a special device that will print a customer's statement and enter the account in a ledger at the same time. The machines are designed to improve all bookkeeping operations that require two original records.



Range line includes many new features

Circle 9 on Readers' Service Card

A new line of 30-in. gas ranges that includes many new features has been announced by Weilbitt. The "top of the line" model features a special illuminated background and electric clock; timer and appliance outlet, and "Sizzl-Griddle." All models include removable, light-weight burner caps, blow-out proof oven and top burner pilots, instant "Flashline" ignition of top burners and many other unusual features.



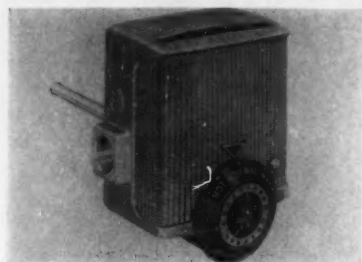
Hand reamer for 3 1/2 to 4 in. pipe and conduit is announced

Circle 10 on Readers' Service Card

In just seconds the new Ridgid No. 354 Spiral Reamer smooths the inside edges of 3 1/2 to 4 in. pipe and conduit. The ratchet handle speeds work in tight quarters. Seven spiral cutting edges pare off metal with least effort. The hand grip has a large pressure plate for comfortable application of body pressure

For further information on these products use Readers' Service Cards on pages 81, 82

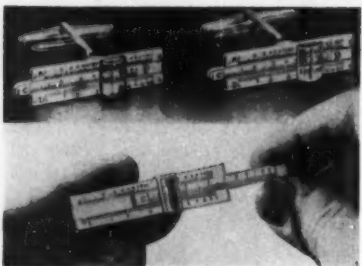
when necessary. Hollow reamer construction reduces weight for easy handling and carrying. The hardened tool-steel cone is removable for sharpening.



Water heater control designed for easy servicing

Circle 11 on Readers' Service Card

A new gas water heater control, available from Grayson, features a slip-top cover and flip-top lid for easy servicing. The unit designed for use on a wide range of water heaters, includes a built-in pressure regulator and universal pilot gas filter.



Miniature slide rule tie clasp really works

Circle 12 on Readers' Service Card

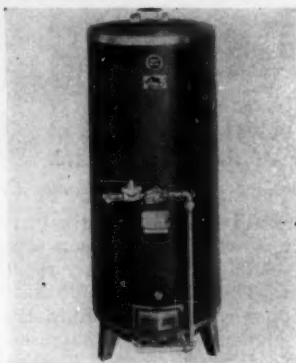
A 2 in. miniature slide rule tie clasp that really works has been announced by Leslie Creations. Fully calibrated with A, C, and D scales, a tiny moving glass magnifies etched numbers. Matching cuff links, which are non-operating, are also available. All in sterling silver.

Die-cleaning attachment added to cylinder printer

Circle 13 on Readers' Service Card

A die-cleaning attachment has now been added to the Print-O-Matic, a cylinder printing machine which applies a dealer's name and trade mark in up to five colors. The new machine comes with two rubber printing dies. One is used on the machine, the other is put in solvent in the washer. Each week,

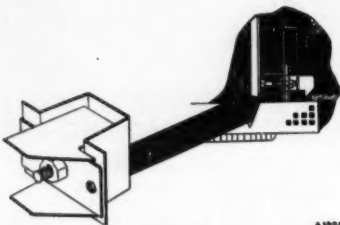
the die on the machine is exchanged with the clean die from the washer. Romeo Herow, the manufacturer, claims that his attachment will increase die life five to eight times. The attachment can be added to existing machines.



Commercial water heater produces high volume

Circle 14 on Readers' Service Card

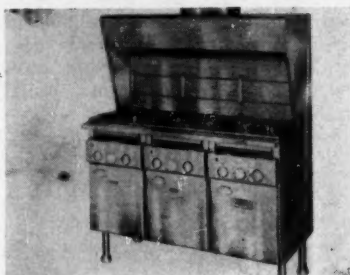
John Wood has introduced a line of "high-volume" commercial automatic gas water heaters. Available in circulating or storage models they are produced only with glass-lined tanks. All models are finished in gun metal enamel with copper trim. AGA approved for 180 deg. F water temperature operation. Extra heavy steel tanks are tested at 355 lb pressure.



New device permits "locking in" wall ovens in 29 seconds

Circle 15 on Readers' Service Card

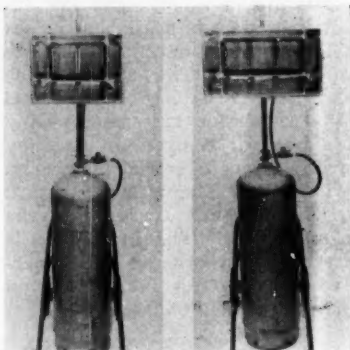
A new method of installing built-in ovens has been announced by Preway Inc. It permits "locking-in" wall ovens in 29 seconds and is designed around a device known as "Expansion-Lock." The device, on which a patent has been applied for, is concealed in left and right hand oven walls. Access is gained by removal of two chrome buttons. After this, only one tool, a screwdriver, is needed to turn the two Expansion-Locks until the oven is firmly mounted in its cabinet opening.



Range exhaust system removes all cooking odors

Circle 16 on Readers' Service Card

Keating exhaust systems remove 900 cu ft of air per minute per lineal foot and are available for any size or type of range or cooking equipment.



Three sizes of portable infra-red heaters available

Circle 17 on Readers' Service Card

Perfection announces a portable gas-fired infra-red radiant heater. The infra-red rays are produced by burning the gas on the surface of a $\frac{3}{8}$ in. thick perforated ceramic mat containing 200 holes per sq in. It's available in three sizes. The smallest, a portable "Handi-Heater" weighs only 8 lb. Two larger sizes are mounted on vertical support rods attached to wheeled propane bottle carriers. Seven adjustment positions are provided, from $3\frac{1}{2}$ to 7 ft high. The larger model (right) is rated at 36,000 Btu input while the smaller's input is 24,000 Btu.

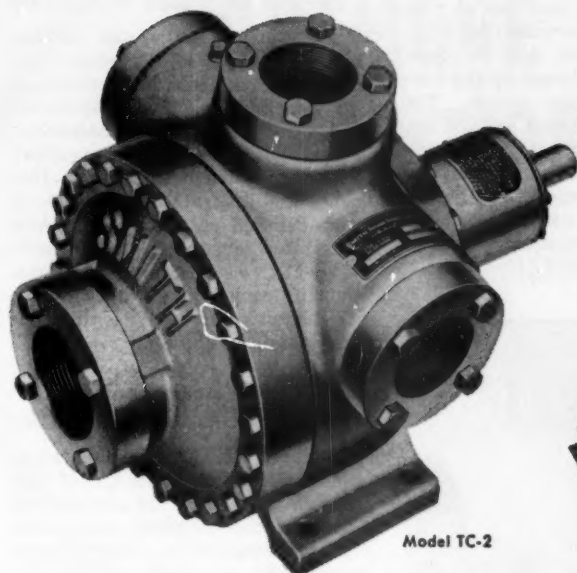
New 40-gal. water heater stands less than 5 ft high

Circle 18 on Readers' Service Card

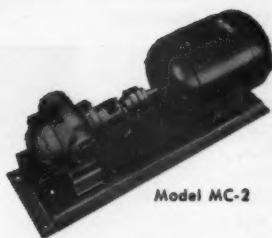
Pennsylvania Range Boiler Co. announces the new Bradford series B, glass-lined 40-gal. "short" gas water heater. Overall height to top of vent is 59 $\frac{13}{16}$ in., width 20-in. L. P. gas recovery is 25.2 at 100 deg. F.

NEW

FLANGED PUMPS



Model TC-2



Model MC-2

Save Installation Costs

Smith Pumps, known for superior design and lasting qualities, have been available for some time with STEEL flanges at end and side ports as optional equipment on these models: TC-2, TC-3, MC-2, MC-3; and as standard equipment on these models: ATC-2R, ATC-2L, ATC-3R, ATC-3L. This saves the cost of unions or extra flanges in the piping, simplifies installation and removal of pump.

Flanges are made of STEEL. Either threading or welding types available—specify which, at time of order.

Designed specifically for SAFETY, LONG LIFE, and EASE OF INSTALLATION, Smith Flanges offer valuable features not usually found in competitive units.

- Flanges are made of STEEL, not cast iron or ductile iron. Cannot crack even on tough applications.
- Flanges available in either threading or welding types. (The only pumps with welding flanges.)
- Flange bolts have hexagon heads, are toughened by heat treatment. No need for special wrenches as with socket-head bolts. Heat-treated bolts will not have heads deformed even if adjustable crescent wrenches are used.
- Semi-permanent O-ring type gaskets assure safe, leak-proof service for years, can normally be re-used if necessary.

There is a SMITH PUMP for every LPG requirement: truck and bulk-plant units for small, medium, and large-volume transfer work, combination pumps, high-capacity heavy-duty pumps, and special models.

PHONE: MURRAY 2-2293 or MURRAY 2-2691

SMITH
PRECISION PRODUCTS COMPANY

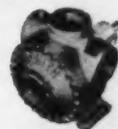
1135 Mission Street, South Pasadena, California

Southeastern Distributor: Pond-Johnston Inc. Warehouses in Mobile, Ala.; Jacksonville, Fla.; Dallas, Tex.

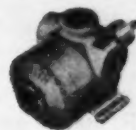
Western States Distributor: Teeco Products, Inc., 3920 West Burbank Blvd., Burbank, California.



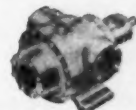
For delivery truck service where flexibility is desirable. 20 GPM at 500 RPM or 35 GPM at 900 RPM model TC-H



For average truck service 50 GPM model TC-2 Flanges Available



For "high flow" delivery truck service 100 GPM model TC-3 Flanges Available



For trucks with automatic transmission 50 GPM model ATC-2 100 GPM model ATC-3



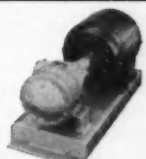
Will fill all small tanks as fast as any larger pump. 100-lb. cys. in 4 minutes or less. 20-lb. cys. in 1 minute or less. fork lift tanks no problem. 10 GPM models EC-1, EG-1, MC-1, and GC-1. 15 GPM model EC-H.



For small volume transfer work. 20 GPM model MC-1044 35 GPM model MC-1044H



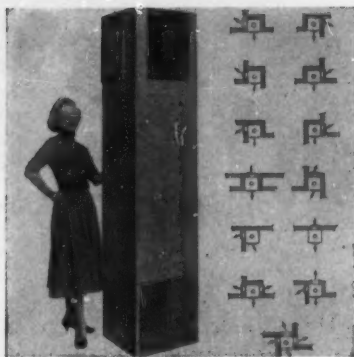
For medium volume transfer. 50 GPM model MC-2 or MC-2Q (higher pressure, quiet running)



For large volume transfer 100 GPM model MC-3 Flanges Available



For high capacity loading 150 GPM model MC-4



Recessed gas heater requires only 18 x 18 in. floor space

Circle 19 on Readers' Service Card

Designed for small homes, zone heating, apartments and motels, a new Holly-General "Slim Jim" model 504 heater is a 50,000 Btu, vented, recessed four-way air-flow gas heater. The unit circulates large quantities of warm air through two, three or four outlets high on the unit. All return-air can be taken in through the low front grille, or knock-outs may be opened on three sides for additional return-air grilles, as needed. Requires only 18 x 18 in. floor space.



New pipe pushers incorporate a 12 in. stroke design

Circle 20 on Readers' Service Card

Mercury Hydraulics announces major changes on all 1960 models of its "Speed-Thru" pipe pushers. Major changes incorporate a higher speed and 12 in. stroke design to push 1 ft in 11 seconds. The pushers come in three sizes capable of gripping up to 4 in. ID pipe, and they have thrusts up to 110,000 lb. They can be installed in a 52-in. operating trench.

Appliance regulators designed for outdoor gaslights

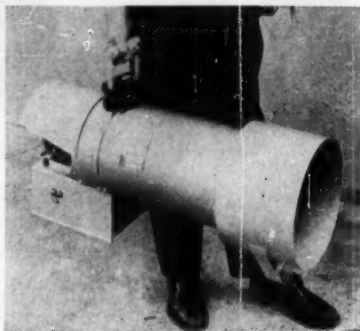
Circle 21 on Readers' Service Card

Two appliance regulators designed especially for use in outdoor gaslights are now being produced by Reynolds. They are the NR-1 8 E for ounce to ounce regulation, and the NRB-1 8 E, for psi to ounce regulation.

LPG transport incorporates new design

Circle 22 on Readers' Service Card

A new LPG tank transport, incorporating many new design features, has been announced by ACF. One of these is the ACF-designed "Sigma" baffle to break up the harmonic action of gas surges. The baffle is an adaptation of the design used in ACF "king size" tank cars. Other features include a safety relief valve, rotary gauge, fixed liquid level gauges, pressure gauge and thermometer, all of which are installed in recessed openings.



Heater weighs 45 lb. produces 200,000 Btu

Circle 23 on Readers' Service Card

Aeroil has announced an L. P. gas heater which produces 200,000 Btu and weighs 45 lb. The heat delivery end is a venturi tube which sucks cold air in from the floor. The cold air is then mixed with hot air from the combustion chamber, giving a warm blast and protecting the floor area from excessive heat. The main burner is automatically extinguished if power fails. Additional safety is furnished by closing the gas line automatically if the pilot or main flame goes out.

New thread tape provides leakproof threaded pipe joints

Circle 24 on Readers' Service Card

Easy application of "ttp" thread tape, made of duPont's chemically inert "Teflon," speeds assembly of leakproof threaded pipe joints for UPVC (unplasticized polyvinyl chloride), stainless steel, aluminum and other corrosion resistant piping. The thread tape is unaffected by corrosive materials, is self-lubricating and prevents joints from freezing. The tape, available from Tube Turns, comes in 1/2 x 520 in. rolls, enough for 200 1-in. pipe joints.

TRADE LITERATURE

Heating, air conditioning data

Circle 25 on Readers' Service Card

An 8-page, full color catalog combines gas-fired, forced-air furnaces and residential air conditioning into one, practical, easy-to-follow brochure. Representative models of Chattanooga vertical, horizontal, and counterflow furnaces are illustrated in color, along with detailed cutaway views. Also illustrated are complete summer-winter air conditioning systems, showing each type of furnace with its respective air conditioning system installed.

Day & Night pocket catalogs

Circle 26 on Readers' Service Card

Sixteen-page pocket-catalogs summarize the complete line of Day & Night water heating and heating and air conditioning equipment. The presentation on water heaters covers the company's entire line and in addition presents the story of design and construction features, including Jetglas lining. A blank price sheet lists all models and provides a space for dealers to fill in their own list prices and monthly payments for credit selling. The catalog on the heating and air-conditioning line is designed along similar lines.

Gas-fired hydronic heat folder

Circle 27 on Readers' Service Card

A folder on the homeowner advantages of gas-fired hydronic heat with Hydrotherm boilers is being made available to plumbing and heating contractors, architects, and builders for use as a selling tool. The large boiler illustration on the cover becomes a giant cutaway when the folder is opened. Mechanical and performance advantages are illustrated by pointers directing the reader to the sections described.

Specialty steel buyers guide

Circle 28 on Readers' Service Card

A 40-page guide for buyers of specialty steels is available from Carpenter Steel. Included is a tool steel selector chart which provides a system of matching tool steels without resorting to "cut-and-try" methods. Numerous tables show the properties and workability of major types of stainless steel and high temperature alloys.

FOR MORE INFORMATION

about New Products
in this Issue

Each New Product or Trade Literature item reviewed in this issue is numbered. Circle the corresponding numbers on the Readers' Service Card; then PRINT your name, title, company and address plainly and drop the card in the mails (no postage is needed).

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FOR MORE INFORMATION

about New Products in this Issue

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USE THESE
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Circle the
number of the
item requested

With winter weather in full swing, the alert dealer will keep his weather eye peeled for construction jobs that require temporary heating. Occasionally, these can prove to be real bonanzas, as shown by this example.

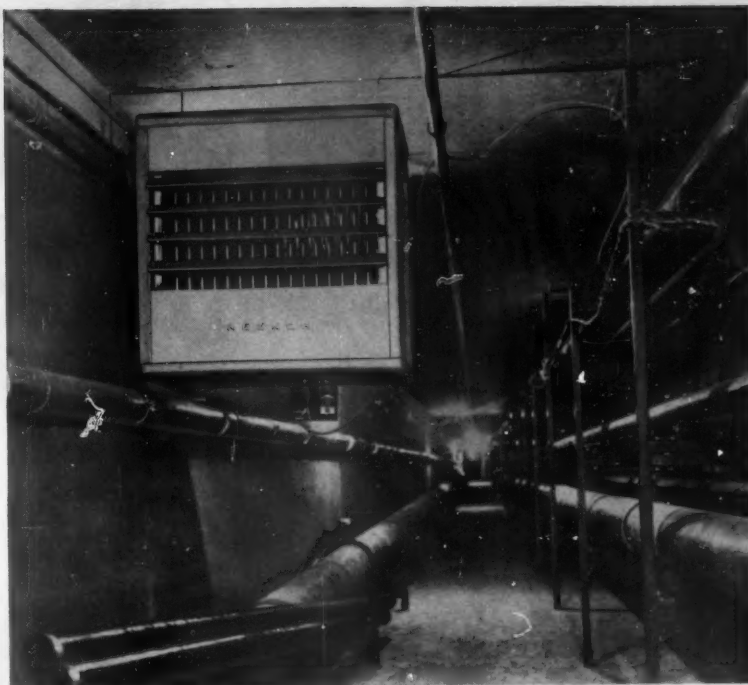
LAST winter, Home Gas Co. of Minneapolis supplied propane to a very unusual heating installation, a 2300 ft tunnel at the local airport. The installation was developed to enable workmen to work through the cold and damp Minnesota winter conditions. The poured concrete tunnel serves the new Northwest Orient Airlines maintenance base. It runs from the power plant to the hangar and contains all steam, air, water, and sprinkler lines which serve the hangar.

The combined staffs of Home Gas and the Fred Comb Construction Co. developed the heating system. They specified 22 Reznor heating units.

In the tunnel proper, 16 250,000 Btu unit heaters with low voltage controls were suspended, all facing toward the hangar. These units exhausted through vents in the tunnel roof. In the power plant, two 300,000 Btu duct furnaces equipped with cabinet blowers brought fresh air into the power plant. Also installed in the same building were two 200,000 Btu unit heaters with low voltage control and two 300,000 Btu unit heaters.

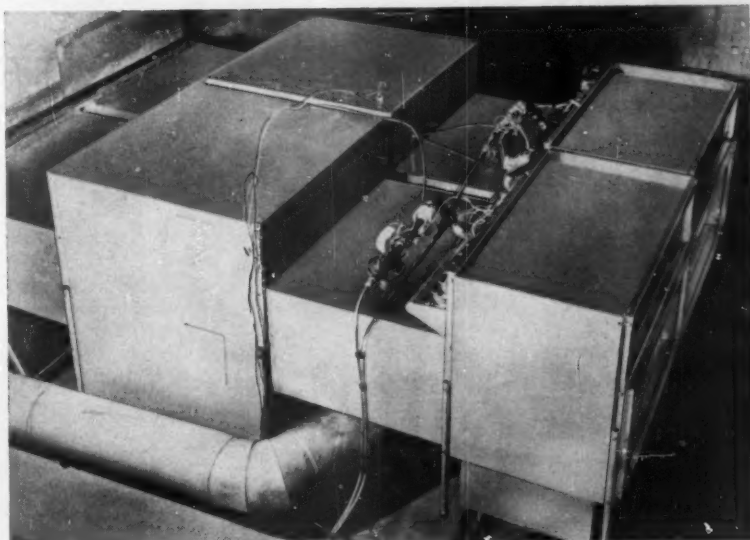
The use of low voltage controls permitted easy installation, since they require light wires. Such wiring can be installed and shifted easily, since heavy conduit or other protection is not required.

How big was the load? Six 1000 gal. tanks had to be installed at the site to keep the half-mile tunnel heated! ■



Shown here is one of the 16 250,000 Btu Reznor heaters installed in a 2300 ft. tunnel during a construction project at the Minneapolis airport. The heaters were dismantled and removed when the job was completed.

Keep a weather eye for construction heating loads



The heaters in the tunnel relayed and reheated fresh air brought in at the power plant building, located at one end. This fresh air was originally brought in and heated by the two 300,000 Btu Reznor duct furnaces shown here. They are equipped with a cabinet blower. Also in the same building were four large heaters.



Butane, Propane

POWER

CARBURETION • INSTALLATION
• SERVICING

What Is It?





What Is It?

The cylinder's a giveaway! It's a propane-powered tractor—but it runs on electricity! Under the hood are 1008 individual fuel cells which instantly convert chemical energy in the LPG to electrical energy. An Allis-Chalmers research vehicle, it's the first tractor application of a promising new power source.

ELECTRICITY generated by L. P. gas in fuel cells powers a tractor recently unveiled by Allis-Chalmers Manufacturing Co. in Milwaukee. This is the first vehicle-propulsion application of the new source of power. It opens broad new vistas in LPG utilization and may one day provide power for homes, factories, and even space vehicles.

The fuel cell is an energy source that has only recently approached commercial development. The AGA and other organizations have been intensively researching it, but primarily as a means of generating enough current to power a furnace fan. This would make the complete heating system entirely independent of outside power sources. Power failures would have no effect, then, on forced air furnace operation.

Usage as a power source for vehicles, however, broadens the fuel cell's scope greatly. This use also ties it closer to LPG as a source of the needed chemical energy.

Fuel cells are likened to other electric cells, but have much higher efficiency. Like conven-

tional batteries, they consist of electrodes and an electrolyte. Unlike them, fuel cells store no energy, but instantaneously convert chemical energy to electric energy.

LPG has no monopoly as a source of energy for fuel cells. Other types of cells being investigated would use solid fuels as well as other gases. However, because of its ease of handling, propane appears to be the logical choice, particularly, for vehicular applications.

The 5270-lb A-C research vehicle develops at least 3000 lb of drawbar pull, enough to pull a multiple-bottom plow, according to company officials. The electricity that drives it comes from 1008 individual fuel cells, joined in 112 units of nine cells each. The 112 units are arranged in four banks. Electricity can be taken from any combination of the banks.

The gases—a mixture which is "largely propane"—are fed into the cells through a system of tubing. In the cell, the gases are adsorbed by the catalyst on the anode electrode. They are activated and react in the electrolyte, releasing a stream of electrons (direct current) to the external circuit. Meanwhile, oxygen is adsorbed at the cathode electrode, reacting with an electron from the external circuit and with the elec-

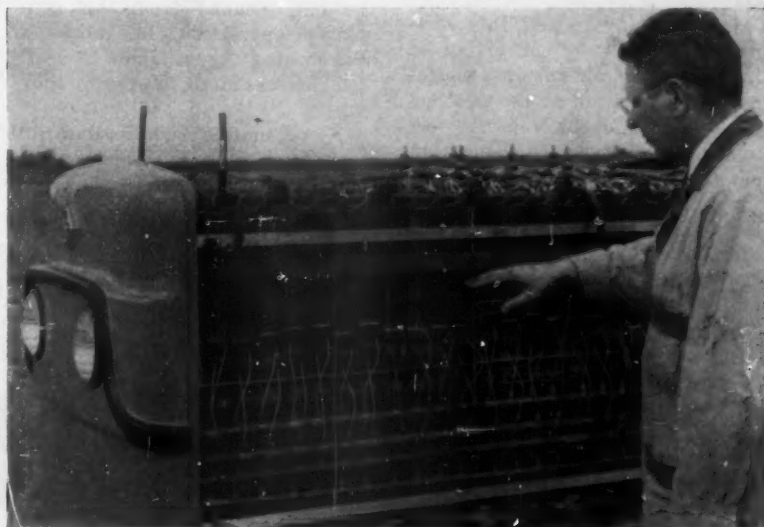
trolyte, reforming the ion used up at the anode electrode.

The direct current flows through the external circuit along a bus bar to the standard controllers. This device regulates the supply of electricity to a 20-hp D.C. motor, permitting the driver to regulate speed or reverse the tractor's direction. Speeds are varied by varying the amount of current going to the motor. This is done by placing the four banks in series or in parallel.

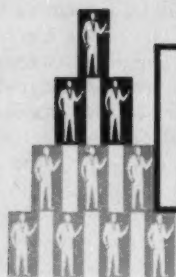
Only two levers are needed, one for regulating the speed, the other for reversing direction. The latter is accomplished by changing the polarity of the current flow.

What, at this point, is the advantage of the fuel cell as a power source for driving vehicles? Aside from the various cost factors that are at this point undetermined, the method has one immediately apparent edge over existing systems: there is no theoretical limitation on efficiency. Because the fuel cell does not involve heat but converts chemical energy directly into electric energy, it escapes the energy losses of a high-heat engine.

A-C engineers talk of "90 per cent efficiency, which is truly startling when compared to the best diesel engines, which are about 40 per cent efficient." ■



A member of the research team that built the tractor points to a unit of nine 1/4 in.-thick, 12-in. sq fuel cells. The 1008 cells produce 15 kw of direct current, which flows through the bright horizontal bus bars shown here to the driver's controller unit.



HOW

does JOE ROSE

PREPARATION! That's the key to the successful carburetion sales campaigns conducted by John J. (Joe) Rose, president of Propane Industrial Service Inc., Willoughby, Ohio.

Rose, who doubles as the company's top sales executive, founded the firm three years ago. He has devoted it chiefly to carburetion conversion sales and service. Presently, 85 per cent of his customers are in this category. The company has sold close to 300 conversion units and is still supplying the LPG for each one.

One of the largest of these conversion sales was to Cleveland Graphite Bronze Co., a division of Clevite Corp. It's located close to Propane Industrial, which is 20 miles east of downtown Cleveland. At Graphite, Rose's company sold and helped install 91 carburetion conversion units—for the entire fork lift fleet, plus other in-plant equipment, sweepers, runabouts, etc.

In preparing to sell this company on the idea of converting its in-plant fleet from gasoline to propane, Rose started at the fleet superintendent level. He is not necessarily set about the direction of his initial approach. Usually though, he prefers to start at a lower level. He tries to convince these people of the advantages of conversion. Once this is accomplished, he has them "on his side." Then his next job is to help these "converts" convince the next level of management (usually the purchasing department), and so on, to top management. He figures he has a much better chance of success when he already has the company's employees "working" for him.

"Sometimes though," he cautions, "you find you're better off if you go directly to the top. I've

EXCLUSIVE



Joe Rose (in suit coat) discusses the conversion with Cleveland Graphite Bronze Co. officials.

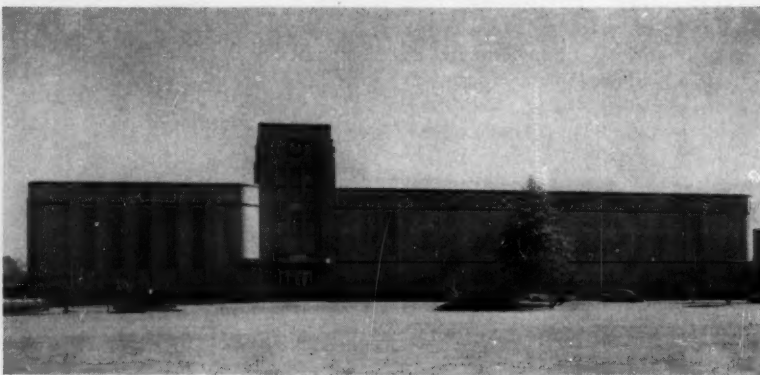
found times when it's easier to see the president than one of his subordinates."

Having seen the Cleveland Graphite Bronze equipment used by the company and noted some of the firm's operating procedures, such as refueling practices, Rose went to the company's purchasing department. Using the economies realized in other firms' carburetion conversions and the few facts he had gleaned from this company's operations, he talked to Purchasing Agent John C. Hall, and his assistant, Merko S. Florjancic.

He persuaded them to allow him to prepare a study on the advan-

tages of such a conversion. Once this permission was granted, Rose knew he had the job more than half won. He knew that propane carburetion would do a better job. All that was left was to show management how.

His next step was preparing this study. Using reprints of articles, such as the BUTANE-PROPANE News story, "America's Leading Industries Use L. P. Gas Fork Lift Trucks" (May, 1957), he started compiling this material. Cleveland Graphite Bronze made available to him its fleet operating and time-study costs using gasoline. These were compared with the estimated costs of LPG con-



The modern headquarters of Cleveland Graphite Bronze is the site of the big sale.

make his really big sales?

At right is the covering letter that accompanied the presentation Joe Rose made to Cleveland Graphite Bronze. Below are two worksheets full of figures supporting his sales arguments, only a small fraction of the material included in the presentation.

Mentor, Ohio
March 6, 1959

Cleveland Graphite Bronze Company
17000 St. Clair Avenue
Cleveland, Ohio

Attention: Mr. M. S. Florjancic
Purchasing Department

Dear Mr. Florjancic:

In order that you might have all available facts concerning the savings possible with propane operation of your in-plant equipment (over your present operation with gasoline), we offer the following for your study:

Your annual savings in fuel and oil changes would be \$12,196.66. Maintenance savings are estimated conservatively at \$25,000.

Over a five-year program this would amount to total savings of \$60,982.30 on fuel and oil and \$125,000 on maintenance or a total of \$185,982.30.

These figures represent only a portion of your fleet since accurate figures are possible only for the lift trucks. These figures also represent only the use of bulk propane instead of bulk gasoline. If cylinder exchange is desired we estimate additional savings of \$108,191.16 annually, and overall total savings of \$726,936.10 for a five-year program.

This can all be accomplished with no outlay of cash on your part and no capital expenditure, if you so desire. The other features you benefit from are mainly a cleaner and safer operation, which will promote better employee relations, and a cleaner and safer factory.

Since the above figures are fantastic, we are attaching to this letter the methods used to compile them. We sincerely hope that you will study this data and the attached reports in detail and will schedule a meeting with us as soon as your study is completed. We also realize that progress is often best made with differences of opinion and that other factories' reports and results might disagree with your point of view or your factory operation and cost-accounting. We have tried to analyze from an impersonal and informative viewpoint.

I would like to thank you for your very courteous attention and cooperation received from all of your people.

Very truly yours,

John J. Rose
President
Propane Industrial Service, Inc.

March 6, 1959

WORK SHEETS FOR CLEVELAND GRAPHITE BRONZE

All information on present operation on gasoline is taken from Cleveland Graphite Bronze's records and time-study of operation.

Annual consumption of gasoline is 99,829 gal. @ 23¢ less 5¢ tax rebate for an annual gasoline net bill of \$17,969.22.

Present oil changes, including oil, filter, labor, and truck down-time, on an annual basis amount to \$7,758.60.

Thus, the total annual gasoline and oil bill is \$25,727.82.

Annual consumption of propane for same work would be 79,663 gal. @ 15¢ per gal. or \$11,949.45.

Annual oil change requirements (20% of gasoline) would be \$1,531.66.

Total annual propane and oil bill would be \$13,531.16.

Total annual savings with propane bulk instead of gasoline bulk would be \$12,196.66.

Total annual savings with propane cylinder exchange instead of bulk propane would be \$108,191.16.

Total savings over five-years using cylinder exchange, which is recommended in this case, would be \$726,936.10.

This study is based on the following equipment:

27 lift trucks (4,000 to 6,000 lb. cap.)	5 lawn mowers
3 Elwell Parkers	2 yard tractors
3 Heli-Tower pallet trucks	1 Hough Payloader
1 Charlotte Mule C262	1 yard Cletrac
20 Ruda-type Jeeps	1 Tenant sweeper
11 Outman scooters	1 Commo sweeper
	1 Jeep

The bulk of our figures on savings cover the 40 pieces of lifts, scoops and yard equipment. The air-cooled equipment is difficult to evaluate because it is fueled differently and is in intermittent use. We recommend that the six-cooled units be converted after the lifts. Fuel consumption with both propane and gasoline is taken from Ford Motor Company's report entitled "Ford Motor Company Researches LP-Gas for Industrial Trucks." This report is considered conservative and holds up to consumption records of many other companies in your area. The report is attached.

Oil change costs have been arrived at by the following method. Your maintenance department changes oil every two weeks on the lifts. Forty lifts times 26 annual changes gives 1,040 annual changes. (Cross-checking on filters, truck-time, and your reported oil consumption, these figures do not hold up. Therefore, we must conclude that it is physically impossible for your present maintenance force to enforce the every-other-week change method.) We used the following figures:

30 min. labor @ \$5.14 per hr.	\$ 2.57
30 min. truck down-time @ \$ 6.00 ..	3.00
1.2 gal. oil @ 80¢ per gal.96
1 oil filter @ 93¢93
Total cost per change	7.46

For 1,040 changes \$7758.60

Work Sheet for Cleveland Graphite Bronze - 2

The maintenance savings figures are taken from Douglas and Lockheed aircraft factory records, copies of which are attached. They kept excellent records which show annual savings of better than \$500 per 3,000-lb. lift truck per one-shift operation. Reflected in their figures are the oil change items we have evaluated above. Since your operation has more than one shift daily, we estimated your maintenance savings at only \$500 per truck, plus an additional \$5,000 annually for the 50 air-cooled pieces of equipment. This, we feel, is conservative.

Regarding the use of bulk systems, either gasoline or propane, vs cylinder exchange, we have used the following. Your present re-fueling time on gasoline equipment is set up for two half-hour periods each day for each shift. If fuel is needed in between, it is usually taken in small cans by your maintenance department. Using a base of 50 working weeks of five days each and loss of time (due to re-fueling) of 10,000 hr., plus 250 hr. for the pump-man. Using a base figure of \$5.14 for pump-man and truck operator and a base figure of \$6.00 per hr. for the truck time, we get an annual cost of \$1,285 for pump-man and \$111,400 for truck operator and truck. Since these identical figures would be present with bulk-refueling on propane, we highly recommend cylinder exchange for obvious reasons.

In the cylinder study, we considered one minute as ample time for re-fueling. The cost of fuel tanks is taken at \$900 per year for five years, either under direct lease, lease purchase, or outright purchase. Additional fuel cost of 1.5¢ per gal. is also figured for cylinder supply over bulk fuel cost. The gasoline pump location, the enormous distances that your lift trucks in every factory must travel to refuel, and the fact that most all lift trucks in every bulk fuel. In cylinder exchange a sensible and safe arrangement can be made for storage in the area in which the truck works. Using a daily cylinder exchange plan such as we propose will cut down the refueling time to one minute or less every 9 to 12 hours per truck with the truck and operator in full view in locating your cylinder storage in convenient locations throughout the plants and in using warning lights or buzzers or both to indicate to truck operators the proper time to exchange a cylinder.

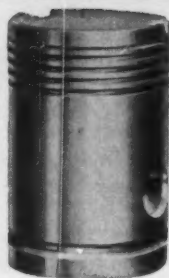
The data used in this report is taken from large and reputable manufacturers and is not our own. The virtual elimination of carbon monoxide and smoke is a matter of record as well as the safety record of propane as a motor fuel.

Enclosures:

- "Ford Motor Company Researches LP-Gas for Industrial Trucks" - Linde Co.
- "Switch to LPG Gas Operations, Maintenance Costs" - Industrial Gaseous, Inc.
- "LPG Motor Fuel and You" - Marvel-Schebler Div., Borg-Warner.
- "America's Leading Industries Use LP Gas Fork Lift Trucks" - Butane - Propane News.
- "Cost Sheet Based on Records from Douglas and Lockheed Aircraft Plant Experiences" - American Liquid Gas Corp.
- "Stop Carbon Monoxide Hangover" - Dean Products Mfg. Co.

Note: Many more references are available if you wish to review them.

for long wear
low vibration
fast pick-up
**JOHNSON
VANASIL
PISTONS**



JOHN DEERE
Vanasil or
Aluminum
Pistons—jump
power output
as much as
25%

**MINNEAPOLIS-
MOLINE**
"U" Vanasil
Pistons—light-
weight, yet tough
as cast iron



LP conversions of John Deere and MM-"U" tractors result in more power and performance with Johnson Vanasil Pistons. Newly patented Vanasil amazingly combines the hardness of cast iron with the lightness of aluminum. Precision Johnson machining and engine "know-how" keeps pistons snug without sticking. Tractor vibration is kept low... stalling eliminated... pick-up increased.

For John Deere A, G, "50", "60" and "70"... also Minneapolis-Moline "U". Johnson Aluminum Pistons are available for John Deere A, B, D, G and H models



JOHNSON COLD MANIFOLDS FOR LP GAS keep constant flow at correct temperatures... are available for:

John Deere A, B, D, G
International H, M, W-9
Allis-Chalmers W, WC, WD, WF
Ford 600, 700, 800, 900 Series

—also International and Chevrolet trucks.

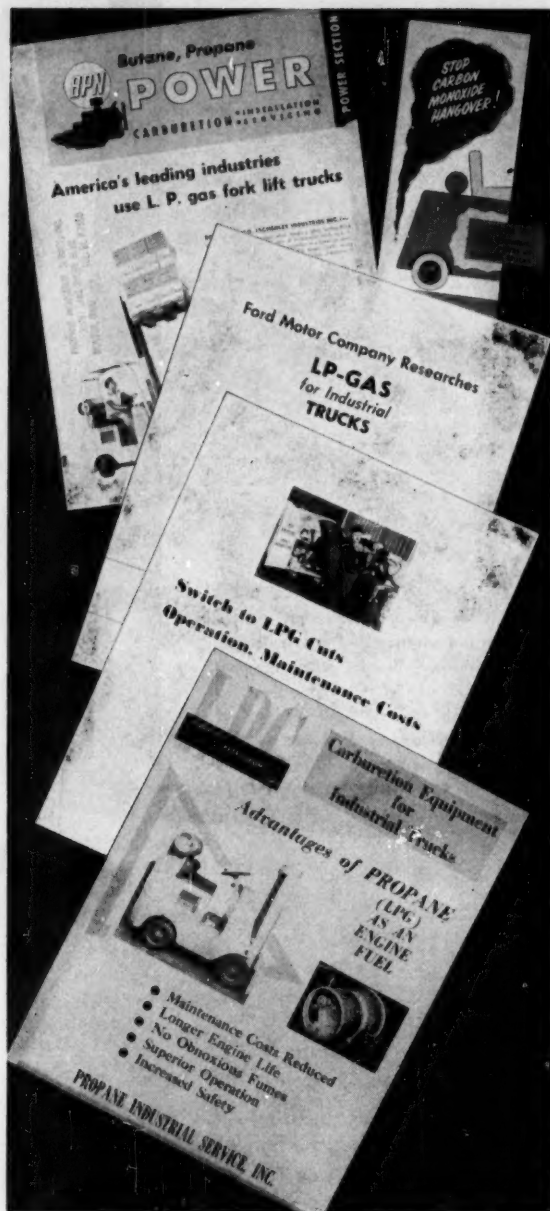
WRITE for literature and prices.

**JOHNSON
MACHINE SHOP**

DEPT. B-31

PONTIAC, ILL.

Here's a portion of the enclosures that went with the presentation made to Cleveland Graphite Bronze. Besides the BPN reprint are sales literature pieces prepared by Beam Products Manufacturing Co., Industrial Gastruck Inc., Linde Co., and Propane Industrial Service Inc., itself. Also included was material from Marvel Schebler Division of Borg-Warner Corp. and American Liquid Gas Corp.



sumption in a Linde Co. report, "Ford Motor Co. Researches L. P. Gas for Industrial Trucks."

The finished study was presented in a simulated leather cover. It opened with a statement of purpose and scope: to aid the purchasing department to evaluate the three major claims of propane carburetion for in-plant equipment.

1. Safer operation.
2. Cleaner operation and better employee relations.
3. More economical operation than present methods.

A letter from Rose followed in which he listed briefly the savings possible with propane operation, as compared with gasoline. He also stated how these savings, "seemingly fantastic at first, can be made with no outlay of cash on your part and no capital expenditure" if the company so desired.

This letter was followed by a pair of fact sheets, drawn up from the actual operations costs made available by the company. Included in these sheets was the following information:

1. Annual consumption and cost of gasoline.
2. Present oil change costs, including oil, labor, and truck time.
3. Total annual bills for gasoline and oil.
4. Annual consumption and cost of propane.
5. Annual oil changes with propane (20 per cent of these with gasoline).
6. Total annual bills for propane and oil.
7. Total annual savings with propane bulk as compared to gasoline bulk.
8. Total annual savings of propane cylinder exchange as compared to propane bulk.
9. Total savings over five years with cylinder exchange (which was recommended in this case).

These carburetion costs had to be estimated in an advance study such as this. The sources of these estimates were noted and copies were included. Fuel consumption figures were taken from the Ford Motor Co. report. It was noted that this report was considered conservative and held up to consumption records of many other companies in the Cleveland area.

An explanation of the oil change cost estimates was followed with the source of such estimates. The study then went into the advantages of cylinder exchange over bulk systems. Included here were such things as time-cost of travel to and from bulk storage plus the time saved in the simple exchange of cylinders vs. pump-type refueling.

At the end of that segment of the report were the many enclosures from manufacturers of carburetion equipment, fork lift truck builders, satisfied "converts" and other reports such as those which cited the virtual elimination of carbon monoxide and smoke and the improved safety factors made possible. Also included was a reprint of the BPN article.

Next in the study were firm quotations for the costs of services and supply of the following: Conversion by Propane Industrial of six fork lifts (for testing and instructional purposes), additional conversion kits, propane for bulk

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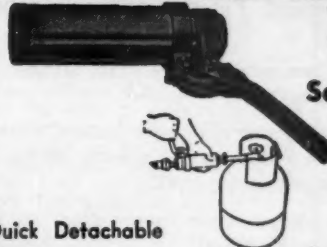
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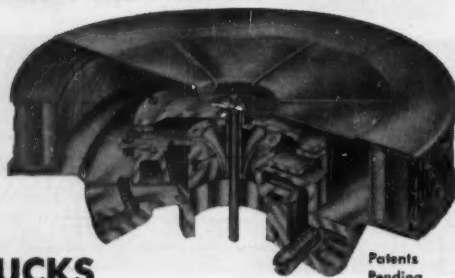
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delivery, and propane for cylinder exchange.

The report concluded with: A description of the fuel to be supplied by Rose's company, a cylinder delivery schedule, a description of maintenance for the cylinders, and information on lease and lease-purchase plans.

Rose's study convinced Cleveland Graphite Bronze management that it would be economically advantageous to convert to propane. The test installation of six fork lift conversions (using liquid withdrawal systems) was made by Propane Industrial. Exhaust analyzer and tachometer readings on these units further convinced the company and another half-dozen trucks were converted, using two well-known brands of carburetion equipment exclusively. During these first 12 conversions, assistance to Graphite's mechanical force on installation, service, trouble-shooting, and safety was given by Dean Stutzman, head of Propane Industrial's carburetion department. He was aided by a factory representative from the carburetion manufacturer.

"Before the two of them were through, Graphite mechanics knew more than either myself or our competitors' salesmen," Rose said.

This knowledge enabled Graphite's personnel to convert the rest of the fleet. One safety school was followed by another six months later.

Reflecting upon this sale, Rose was quick to add that it took him over two years to make it. More than one year was needed just to convince the purchasing department to let him make the study.

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EDITORIAL INDEX

TO VOLUME 21

January Through December 1959

AUTHORS

Allard, J. Gordon: How to protect your capital and make it grow—	
Part 1: Are you earning a satisfactory profit?	Jan. 22
Part 2: Safeguarding your capital accumulation	Feb. 24
Part 3: Should you sell stock, sell for stock, or merge?	Mar. 37
Part 4: How an investment banker can help insure your future security	Apr. 30
Part 5: Are you ignoring LPG's "really great" potential?	May 66
Amos, W. S.: In the British Isles—LPG is a jolly good fuel, old chap	Feb. 36
Arbogast, Paul: Ten years later, earthmovers still making history	Sept. 103
Benn, C. L.: Sell more hot water with scientific sizing	Apr. 21
Benz, George R., W. F. DeVoe and Paul W. Tucker: The 1958 Phillips Report—LPG sales up 9.4 per cent in 1958	Jan. 27
Biggins, E. R.: Product tests the average dealer can use	Dec. 35
Black, Harry W.: Getting rid of oil and gum deposits	May 121
Brand, Lee A.: The truth on electric costs for househeating	Sept. 98
Brower, Martin A.: A desert oasis is a real oasis when it has L. P. gas	Mar. 29
Brower, Martin A.: Indiana appliance distributor—Bryant-Hedback earns its keep	Feb. 19
Clark, William W.: Automated accounting simplifies bookkeeping for 113 operating districts	July 39
Clark, William W.: Higher-priced LPG can be sold against cheaper fuel oil	Mar. 34
Clark, William W.: LPG for plumbers—only	Feb. 33
Clark, William W.: LPG takes over when air freight falters	Apr. 81
Clark, William W.: Routing system controls credit, too!	Nov. 46
Clark, William W.: Temperature compensating meters	Aug. 30
Clark, William W.: Upgrading servicemen—Pyrofax Gas launches new home study course	Jan. 37
Clark, William W.: What is Florida's situation today?	Sept. 29
Clay, Robert: Tailor your '59 Christmas promotion to your needs	Oct. 33
Clay, Robert: Traditional sorghum making modernized with the aid of LPG	July 57
Clifford, Earle A.: A simple, direct-reading leak testing device for L. P. gas installations	May 29
DeVoe, W. F.: George R. Benz and Paul W. Tucker: The 1958 Phillips Report—LPG sales up 9.4 per cent in 1958	Jan. 27
Dickson, Edward G.: A controversial way to build a carburetion load	Nov. 104
Dickson, Edward G.: Atlantic Coast spot report	Sept. 37
Dickson, Edward G.: Tomorrow's tomatoes today—with an assist from LPG	June 23
Dickson, Edward G.: Two-way cylinder leasing	Aug. 41
Drew, Francis, Sr.: How to make a simple cylinder rack for pickups	Mar. 60
Dyer, A. F., H. T. Markee and Paul W. Tucker: How to handle L. P. gas emergencies	Oct. 30
Emmert, E. M.: In plastic greenhouse systems, LPG makes the plants grow	Apr. 26
Finney, Selma: Unexpected bonus pays for conversion in one year	Sept. 109
Gray, Elisha, II: Tomorrow's refrigerator: Key to the all-gas home?	Apr. 57
Harper, William T.: Arundel Gas Co. finds water conditioning profitable	May 58
Harper, William T.: Half-converted ready-mix fleet now saving \$58,000 per year	Nov. 99
Harper, William T.: How do the top salesmen sell?	Dec. 25
How does Felix Dodd sell three times the "normal" number of ranges?	Dec. 26
How does Jesse Barfield sell 600 space heaters a year without outside salesmen?	Dec. 29
How does Kingsley Weatherly "sell" his salesmen to sell his appliances?	Dec. 32
How does Joe Rose make his really big sales?	Dec. 86
Harper, William T.: How radio gives Model Gas an 'office on wheels'	Feb. 50
Harper, William T.: An LPGA convention highlight—BPN's 8th Sales Roundtable	July 29
Harper, William T.: LPG dealers, utilities unite for farm show	Mar. 53
Harper, William T.: LPG solves many problems around large orchard	Aug. 99
Harper, William T.: Suburban speeds office procedures	Sept. 62
Kirkpatrick, Ken: Highway asphalt plants offer huge LPG market	Feb. 29
Kirkpatrick, Ken: Schmitz attracts attention	Jan. 56
Kirkpatrick, Ken: A tank manufacturer offers truck tips	Aug. 48
Lawrence, W. R., Jr.: Motivation theory can sell load building appliances	Jan. 47
Levinson, Milton: Round-the-clock refueling	May 128
Lubbock, James E.: Imperial Oil Co. tells about its promotions that paid	Mar. 23
MacSporran, Charles: Sizing an appliance piping system	Apr. 38
Markee, H. T., A. F. Dyer and Paul W. Tucker: How to handle L. P. gas emergencies	Oct. 30
Martin, Marvin: The story on ductile iron	Nov. 58
Maum, Emmett: The city that went LPG	July 99
Miller, Harry J.: Gulf Coast spot report	Sept. 42
Nichols, L. H.: Meet hot water heat	Sept. 54
Pemberton, H. R.: We publish our own newspaper to sell gas	Jan. 39
Regeimbal, Neil: Both sides ready for 1959 REA battle	Mar. 46
Regeimbal, Neil: Ike's rate proposal draws NRECA fire	Apr. 35
Regeimbal, Neil: Washington Report—Let's look at 1959	Jan. 32
Richard, William M.: Design ideas for building a bulk plant	Nov. 31
Spatz, Michael E.: "Paintenance" is success-key for LPG business	Aug. 34
Springfield, C. C.: After eight years—free radio commercials are still this dealer's best advertising	July 49
Thompson, J. Arthur: Golden Gas Co.'s claim to fame	Apr. 37
Thompson, J. Arthur: LPG-fired peat moss drying operation cuts freight costs 46 per cent	Dec. 52
Thompson, J. Arthur: That's still gold in them thar mills	July 54
Thornhill, Tommy: Had a check-up lately?	Nov. 64

Tucker, Paul W., George R. Benz and W. F. DeVoe: The 1958 Phillips Report—LPG sales up 9.4 per cent in 1958	Jan. 27
Tucker, Paul W., H. T. Markee and A. F. Dyer: How to handle L. P. gas emergencies	Oct. 30
Tuggle, George B.: LPG saves Castle & Cooke \$421 per forklift per year	Jan. 87
Wank, M. E.: There's still time! Build a summer load via this 8-step plan	July 56
Ward, Maris: Found: \$30,000—An open letter to Butane-Propane News	Jan. 44
Wechsler, E. W.: What the serviceman should know about L. P. gas clothes dryer controls— Part 1:	Feb. 42
Part 2:	Mar. 50
Westmoreland, C. C.: The new Z21.30 Standard	Sept. 46
Whitaker, C. S.: LPG-fired automatic brazing improves quality, cuts costs	Nov. 62

FUEL DELIVERY

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- Vehicle Maintenance

Combination truck so useful replacement is needed	Dec. 46
How radio gives Model Gas an 'office on wheels'— William T. Harper	Feb. 50
How to make a simple cylinder rack for pickups— Francis Drew, Sr.	Mar. 60
Make radio work for you	Apr. 28
Petrolane's LPG-powered "Million Miler"	Apr. 79
Preventive maintenance keeps fleet rolling around the clock	Aug. 58
Reviewing the basics of truck selection and care	Aug. 46
Routing system controls credit, too! William W. Clark	Nov. 46
A tank manufacturer offers truck tips—Ken Kirkpatrick	Aug. 48
Transport, bobtail manufacturers continue war on weight	Aug. 52

GENERAL

- Foreign • Industry Statistics • Miscellaneous
- Regulation

Both sides ready for 1959 REA battle—Neil Regeimbal	Mar. 46
First Annual Dealer Survey	
This is your industry	May 33
How the survey was conducted	May 34
The composite dealer	May 35
Profile of the industry	May 37
"Stratifying" the industry	May 41
How the regions compare	May 43
What the industry will sell	May 46
What they'll spend for equipment in '59	May 48
Ike's rate proposal draws NRECA fire—Neil Regeimbal	Apr. 35
In the British Isles—LPG is a jolly good fuel, old chap—W. S. Amos	Feb. 36
LPG dealer and gas utility help each other	May 111
LPG dealers, utilities unite for farm show— William T. Harper	Mar. 58
Natural Gas Invades Florida	
What is the situation today?—William W. Clark	Sept. 29
How does the future look?	Sept. 32
LPG will remain No. 1 with dealership growing into natural gas utility—Edward G. Dickson	Sept. 37
Dealer rides natural gas publicity wave to boost heating sales—Harry J. Miller	Sept. 42
Phillips Report, The—LPG sales up 9.4 per cent in 1958—George R. Benz, W. F. DeVoe and Paul W. Tucker	Jan. 27
Servicemen's school—a real example of gas unity at work	Nov. 54
Washington Report—Let's look at 1959— Neil Regeimbal	Jan. 32

INSTALLATION AND SERVICING

- Appliances • Bottles • Control Systems • Tanks

Getting rid of oil and gum deposits—Harry W. Black	May 121
How to install domestic incinerators	July 36
Leave your customers smiling!	July 51
Rx for old cylinders	July 33
Sell more hot water with scientific sizing— C. L. Benn	April 21
A simple, direct-reading leak testing device for L. P. gas installations—Earle A. Clifford	May 29
Sizing an appliance piping system—Charles MacSporran	Apr. 38
Temperature compensating meters—William W. Clark	Aug. 30
The new Z21.30 Standard—C. C. Westmoreland	Sept. 46
The story on ductile iron—Marvin Martin	Nov. 58
Unique installation uses 34 wall heaters	Aug. 66
What the serviceman should know about L. P. gas clothes dryer controls—E. W. Wechsler	Feb. 42
Part 1	Mar. 50
Part 2	Mar. 50

LOAD BUILDING AND BALANCING

- Agricultural Market • Industrial Loads
- Offpeak Loads • Seasonal Loads

A desert oasis is a real oasis when it has L. P. gas—Martin A. Brower	Mar. 29
A dual-fuel load! Why not? asks Red-E-Gas of St. Louis	June 30
Highway asphalt plants offer huge LPG market— Ken Kirkpatrick	Feb. 29
Illinois farmer profits from mechanical crop drying with LPG	Mar. 27
In plastic greenhouse systems, LPG makes the plants grow—E. M. Emmert	Apr. 26
Keep a weather eye for construction heating loads	Dec. 83
LPG-fired automatic brazing improves quality, cuts costs—C. S. Whitaker	Nov. 62
LPG-fired peat moss drying operation cuts freight costs 46 per cent—J. Arthur Thompson	Dec. 52
LPG for plumbers—only—William W. Clark	Feb. 33
Meet Ollie Ash—Mr. Diversification	Nov. 40
Perfume from cedar stumps with an assist from LPG	May 32
Propane torch is a lifesaver	Feb. 58
Thar's still gold in them thar mills—J. Arthur Thompson	July 54
There's a big gas load in LPG-fired incinerators	May 49
Tomorrow's tomatoes today— with an assist from LPG—Edward G. Dickson	June 23
Traditional sorghum making modernized with the aid of LPG—Robert Clay	July 57

MANAGEMENT

- Accounting and Billing • Credit & Collections
- Employee Training and Relations • Financing
- Insurance • Inventory • Public Relations • Taxes

Accounts receivable system gives Spiller Butane double mileage	Jan. 53
Automated accounting simplifies bookkeeping for 113 operating districts—William W. Clark	July 39
Does your present insurance protect you after an installation is completed?	Mar. 56
Found: \$30,000—An open letter to Butane-Propane News—Maris Ward	Jan. 44
Had a check-up lately?—Tommy Thornhill	Nov. 64
How to protect your capital and make it grow— J. Gordon Allard	Jan. 22
Part 1: Are you earning a satisfactory profit?	Feb. 24
Part 2: Safeguarding your capital accumulation	Mar. 37
Part 3: Should you sell stock, sell for stock or merge?	Mar. 37

Part 4: How an investment banker can help insure your future security	Apr. 30
Part 5: Are you ignoring LPG's "really great" potential?	May 66
Leasing makes diversification possible, helps this small dealer grow	Apr. 50
Leave your customers smiling!	July 51
LPG Will remain No. 1 with dealership growing into natural gas utility—Edward G. Dickson	Sept. 37
Pyrofax Gas launches new home study course—William W. Clark	Jan. 37
Routing system controls credit, too!—William W. Clark	Nov. 46
Servicemen's school—A real example of gas unity at work	Nov. 54
Suburban speeds office procedures—William T. Harper	Sept. 62
Two-way cylinder leasing—Edward G. Dickson	Aug. 41
What price adequate storage?	Aug. 27
What types of insurance for LPG dealers?	Oct. 27

PLANT OPERATION

• Designing and Building • Maintenance • Operation

Design ideas for building a bulk plant—William M. Richard	Nov. 31
"Paintenance" is success-key for LPG business—Michael E. Spatz	Aug. 34
Product tests the average dealer can use—E. R. Biggins	Dec. 35
Round-the-clock refueling—Milton Levinson	May 128
Swing joints, through-flow valves features of new Delaware plant	June 34
What price adequate storage?	Aug. 27

POWER—LPG CARBURETION

• Farm Power • Highway Vehicles • Industrial Power • Materials Handling Equipment. • Public Transportation

The city that went LPG—Emmett Maum	July 99
Comment on LPG tune-up article	Mar. 108
A controversial way to build a carburetion load—Edward G. Dickson	Nov. 104
Convert your tractor—save up to \$2874	Apr. 85
Half-converted ready-mix fleet now saving \$58,000 per year—William T. Harper	Nov. 99
Handling operating problems of L. P. gas engines	Jan. 95
Hollanders like LPG carburetion	Mar. 111
How does Joe Rose make his really big sales—William T. Harper	Dec. 86
Industrial Propane Corp.—We specialize in forklift fuel	Feb. 81
Irrigation builds big load for carburetion specialist	June 95
LPG—the answer to a good humor man's prayer	Sept. 113
LPG takes over when air freight falters—William W. Clark	Apr. 81
LPG solves many problems around large orchard—William T. Harper	Aug. 99
LPG saves Castle & Cooke \$421 per forklift per year—George B. Tuggle	Jan. 87
LPG gets rid of the water	Apr. 86
L. P. gas octane numbers and their relationship to engine performance	Mar. 99
Petrolane's LPG-powered "Million Miler"	Apr. 79
Red-E-Gas focuses on the passenger car market	Oct. 93
Round-the-clock refueling—Milton Levinson	May 128
Service Tips—cold weather starting, oil breather check valves and cross fire	Sept. 112
Ten years later, earthmovers still making history—Paul Arbogast	Sept. 103
Unexpected bonus pays for conversion in one year—Selma Finney	Sept. 109
What is it? (fuel-cell driven tractor)	Dec. 84

PRODUCTION, SUPPLY AND STORAGE

• Fuel Availability • Fuel Statistics • Underground Storage

Bureau of Mines reports U. S. sales of LPG jumped 8 per cent in 1953	Oct. 10
Denver demand boosts pipeline flow by 500%	Apr. 60

Getting rid of oil and gum deposits—Harry W. Black	May 121
Katy railroad's plans jell for pipeline service in Midwest	Nov. 50
Sun Oil cuts overhead with huge storage cavern	Nov. 44

SAFETY

Design ideas for building a bulk plant—William M. Richard	Nov. 31
Does your present insurance protect you after an installation is completed?	Mar. 56
How to handle L. P. gas emergencies—H. T. Markee, A. F. Dyer and Paul W. Tucker	Oct. 30
How to install domestic incinerators	July 36
How to work without straining	Jan. 58
Phillips Report, The—LPG sales up 9.4 per cent in 1958—George R. Benz, W. F. DeVoe and Paul W. Tucker	Jan. 27
A simple, direct-reading leak testing device for L. P. gas installations—Earle A. Cilford	May 29
What the serviceman should know about L. P. gas clothes dryer controls—E. W. Wechsler	Feb. 42
Part 1	Feb. 42
Part 2	Mar. 50

SALES, SALES PROMOTION, ADVERTISING

• Advertising • Appliances, Equipment and Fuel • Displays • Electrical Competition • Promotions • Sales Campaigns

After eight years—free radio commercials are still this dealers's best advertising—C. C. Springfield	July 49
AHLMA's consumer survey reveals new home laundering habits	Sept. 70
America's biggest class market	Dec. 54
Arundel Gas Co. finds water conditioning profitable—William T. Harper	May 58
BPN's 8th Sales Roundtable—William T. Harper	July 29
Comparison on gas, electric water heating	Oct. 88
Dealer rides natural gas publicity wave to boost heating sales—Harry J. Miller	Sept. 42
Effective school range plan can assure future market	July 95
Golden Gas celebrates Colorado's Centennial	Nov. 67
Golden Gas Co.'s claim to fame—J. Arthur Thompson	Apr. 37
Hausgas marks 20th year with successful range promotion	Aug. 70
Higher-priced LPG can be sold against cheaper fuel oil—William W. Clark	Mar. 34
How do the top salesmen sell?—William T. Harper	Dec. 25
How does Felix Dodd sell three times the "normal" number of ranges?	Dec. 26
How does Jesse Barfield sell 600 space heaters a year without outside salesmen?	Dec. 29
How does Kingsley Weatherly "sell" his salesmen to sell his appliances?	Dec. 32
How does Joe Rose make his really big sales?	Dec. 86
How to sell 100 ranges in a month	Apr. 64
Imperial Oil Co. tells about its promotions that paid—James E. Lubbock	Mar. 23
"Imported" clientele builds business for Washington, Mo.	Dec. 42
In 1960 automatic heating's 75th anniversary to be celebrated	Dec. 48
Indiana appliance distributor—Bryant-Hedback—earns its keep—Martin A. Brower	Feb. 19
Literature rack aids in customer dealings	Sept. 91
Meet hot water heat—L. H. Nichols	Sept. 54
Motivation theory can sell load building appliances—W. R. Lawrence Jr.	Jan. 47
Now is the time to sell househeating (Annual Househeating Sell-O-Rama)	June 37
The annual BPN househeating sell-o-rama	37
"Now is the time" to sell househeating	39
What type of heating should you sell?	41
Planning your campaign	46
Carrying out the plan—advertising and promotion	48
How to display effectively	55
How to demonstrate effectively	59
Call on your manufacturers and associations for help	60

Schmitz attracts attention—Ken Kirkpatrick	Jan. 56
Sell more hot water with scientific sizing—C. L. Benn	Apr. 21
Tailor your '59 Christmas promotion to your needs (Annual Christmas Sell-O-Rama)—Robert Clay	Oct. 33
To boost '59 sales, try a Christmas promotion	35
Tie-in with a national Christmas promotion	36
Fall appliance promotions provide two way lead-in	41
Imagination standard display materials—tailored displays	44
Gas-promoting giveaways work for you three ways	46
Widen your line to include LPG-using gift items	51
Brainstorm for ideas that will yank your promotion	57
There's still time! Build a summer load via this 8-step plan—M. E. Wank	July 56
This dealer said "Yes!"	Nov. 37
The truth on electric costs for househeating—Lee A. Brand	Sept. 98
Tomorrow's refrigerator: Key to the all-gas home?—Elisha Gray II	Apr. 57
We publish our own newspaper to sell gas—H. R. Pemberton	Jan. 39

ASSOCIATIONS

Council sets plans for 1960; elects Carpenter its president	Dec. 71
E. F. Coleman is proxy for New York State LPGA	Mar. 84
Georgia LPGA shows what can be done by promoting \$70,000 4-H project	Oct. 84
LPGA convention is one of the largest in history; 140 exhibitors showed their wares	July 59
Mueller elected president of Michigan group	Apr. 74
Pennsylvania firemen see live fire demonstrations	Feb. 66
Pennsylvania LPGA plans farm show exhibit	Nov. 93
Political action speech highlight of Northeast LPGA Convention—Trade Show	Dec. 70
600 attend TBDA convention	Sept. 93
South Carolina LPGA advances with five-point educational program	Aug. 84
Texans hear profit talk, adopt insurance plan	May 112
WLGA mid-year meeting attracts 100 to Los Angeles	Jan. 72
WLGA scores two industry firsts—classroom service, safe driver programs	June 78

BEYOND THE MAINS • William W. Clark

A brief for self-preservation	Aug. 25
Business is where you find it	July 27
Do you take your New Year's resolution seriously?	Jan. 19
\$5 million worth of help	Oct. 22
For one disabled thumb, \$70,000	Nov. 29
It's your accomplishment	June 9
Just how vulnerable are we?	Mar. 19
Just who is the competition?	Sept. 27
Lessons from Schuylkill Haven	Nov. 29
Make way for the "Golden Sixties"	May 25
Some thoughts on price cutting	Dec. 23
The answer is no!	Feb. 17
The recent NRECA convention	Apr. 19

LETTERS

Advantages of propane for making maple syrup	June 12
All late model cars operate well on L. P. gas	Sept. 20
Anybody care to inflate a balloon?	Oct. 19
"At cost" figure is for fixed asset investment	Sept. 20
Boiler rating	June 15
Can use high latitude pistons	Apr. 16
Causes of sticky valves	Dec. 17
Chemical carrying barges have drying problem	Nov. 22
Code requirements dictate tank location	Sept. 19
Codes covering the L. P. gas industry	Nov. 20
Comparative prices of fuels for cooking	Sept. 19
Converted boiler must heat water and buildings	Feb. 9
Converting to LPG	June 12

Cooling fumes cause most discoloration	Aug. 17
Cost of househeating	Nov. 21
"Cost" or "net worth"?	May 13
Customer's solution wrong	Dec. 17
Depreciation periods	Sept. 22
Dirt particles may cause meter inaccuracies	Jan. 8
Discoloration may come from any fuel	July 19
Don't adjust engine timing by chance	Mar. 12
Don't convert outboard motors to L. P. gas	Sept. 22
Don't use AA tanks for storing L. P. gas	Jan. 16
Electric boys are telling tall tales	Aug. 20
Ether sometimes used with propane for steel cutting	Feb. 10
Expansion qualities of commercial propane	July 19
Gas evaporators made for maple syrup	Aug. 17
Gasometers	July 19
Heating crankcases keeps oil warm	Feb. 9
Heating problem in northern state	Nov. 19
How to estimate cylinder depreciation	June 11
Information available on heating concrete floors	June 12
L. P. gases not poisonous	Feb. 10
Only manufacturer's guarantee involved	Oct. 20
Pamphlet No. 58 covers cylinder filling densities	Jan. 16
POL valve connection is standard for cylinders	May 14
Possible causes of regulator fluctuations	Aug. 17
Powering motor, refrigerating truck has many problems	Mar. 11
Pressure changes require regulator corrections	Jan. 8
Problems of weighing and metering gas	Mar. 14
Propane vs. acetylene for steel cutting	June 14
Proper furnace venting prevents moisture in room	June 11
Pumping costs compared	Oct. 17
Radiant heat recommended for concrete slab	Nov. 20
Rating of boilers	May 13
Reasons for "breaking in" new trucks on gasoline	June 12
Reasons for pilot and burner failure	Dec. 18
"Salamanders" should have safety shutoff devices	Aug. 20
Seals used to protect cylinders	July 20
Special heaters for special jobs	June 11
Taking stack temperatures	Nov. 19
Tank leasing	Apr. 13
Temperature correction	Nov. 19
Think before changing compression ratios	Dec. 17
To clean tanks for water service	Sept. 19
To prevent condensation	Apr. 13
Too much primary air may cause flash back	Feb. 9
Trouble shooting at long distance	Oct. 17
Varied uses of weed burners	July 19
Volume reduced with rising gage pressure	Mar. 11
Wants non-sticking plug valve	July 22
Who makes home steam baths?	Jan. 16
Why wouldn't the armed services use LPG	July 22
Wiring boiler controls	Apr. 16

NEWS DEVELOPMENTS

AGA heating controls service manual available	Sept. 68
AGA's Blue Star Home answer to Medallion Home	Nov. 68
AGA studying promising utilization item	July 66
AGA's gas appliance service manual expanded	Jan. 62
AHLMA establishes vocational education plan	Aug. 72
Blue Star Home Program open to LPG men, 1960 Plan	
Book out, AGA announces	Dec. 56
Book I of the L. P. Gas Service Training Course has sold 5770 volumes	Oct. 65
Bureau of Mines reports U. S. sales of LPG jumped 8 per cent in 1958	Oct. 10
Canadian markets open with railroad extension	Jan. 69
Can isolated terminals be organized together?	Dec. 56
Cuban LPG production is meeting domestic demands	Mar. 66
Details of Nation's "largest" LPG cavern	Aug. 74
Flexible gas connector is under study by the AGA	July 64
GAMA publishes new industrial gas directory	Jan. 68
Gas equipment sales up in 19 of 22 product groups	Mar. 62
Grayson mails over 2½ million pieces in first month of consumer safety campaign	June 69
Gross weight limit for trucks in Texas goes up	July 14
Home has replaced auto as family status symbol	Oct. 66
Honeywell launches three major promotions	May 74
Income tax rules covering auto or truck leasing	Aug. 72
Laundry equipment moving back to the kitchen	Mar. 72

Leading manufacturers and association heads forecast a good year for 1959	Feb. 54
LPGA launches first Miss International L. P. gas Contest	Dec. 56
LPGA's new statistic book now available to industry	Jan. 62
National LP-Gas Council dealer sales aids listed	Feb. 60
Operation Snowflake will promote major appliances	Oct. 68
Package lease plan for the gas industry	Apr. 70
Petrolene to inaugurate barge shipments to slash distribution costs in Alaska	Sept. 67
Propane-air plant features "push-button" starting	Jan. 66
Requirements for mobile homes, ok'd by utilities, LPG groups, are back to AGA	Aug. 72
Robertshaw launches industry's first concerted safety campaign	May 11
Safety of LPG told in <i>Los Angeles Times</i> article	Mar. 66
Sell benefits, not price, retailers are told	May 88
Simplified pressure vessel code is now available	Jan. 64
Standard for glass-lined water heaters revised	Oct. 68
Standby plant provides automatic supply	July 72
Strengthened requirements for relief valves noted	May 80
Suburban Gas Service Inc. registers 28% sales gain	Feb. 60
Texas Eastern cuts price of shipping LPG via the Little Big Inch Pipeline	Sept. 68
Texas Eastern's underground storage terminal opened	Dec. 60
U. P. G. Inc. merges with Diversa Inc.	Nov. 68
Wide range of applications seen for gaslights	May 80

WASHINGTON REPORT • Neil Regeimbal

AEC to investigate turning grain surplus into fuel source	Sept. 25
Allocation of fuels during emergency is sought	Mar. 21
Bill proposed to regulate maker's retail sales	Apr. 66
Business fared well during this year's Congressional session	Nov. 25, 72
Businessmen getting active in politics	Aug. 23
Co-ops and the REA	
Let's look at 1959—farm co-op taxation	Jan. 32
Let's look at 1959—REA curtailment	Jan. 32
Co-op tax advantage hit again	Feb. 14
REA will feel bite of 1959 economy axe	Feb. 14
Bills requiring "normal" taxes for farm co-ops may pass this year	May 119
Co-op advertising may again be tax free	May 118
REA moving toward independent status, broader power to "raid" private utility areas	May 17, 118
REA reorganization bill dead!	June 16, 74
Defeat of REA reorganization bill won't slow power co-op subsidization	July 25, 72
"Unavoidable" profit tax on co-ops predicted to pass during current session	Aug. 23, 83
Rural electricity use and bills up, rates down	Sept. 25
Bill to insure co-op tax pending in Congress	Sept. 25, 78
Secretary Benson talks tough to rural electric co-ops	Oct. 25, 66
Farm co-ops fail to slip through immunity bill	Oct. 25
Farm co-op taxes to be studied in Dec.	Nov. 25, 70
REA co-ops vs. electric utility squabble settled by Senate in favor of co-ops	Nov. 25
Farm Federation for single co-op tax	Dec. 21
NREA fears Ike's co-op proposals	Dec. 21
One tax regulation tightened for co-ops	Dec. 21
Fair Trade	
Let's look at 1959—Fair trade	Jan. 35
Federal fair trade fight warming up again	Feb. 58
New, strong federal fair trade law bill now in House committee	May 16
Federal fair trade law in House subcommittee	May 118

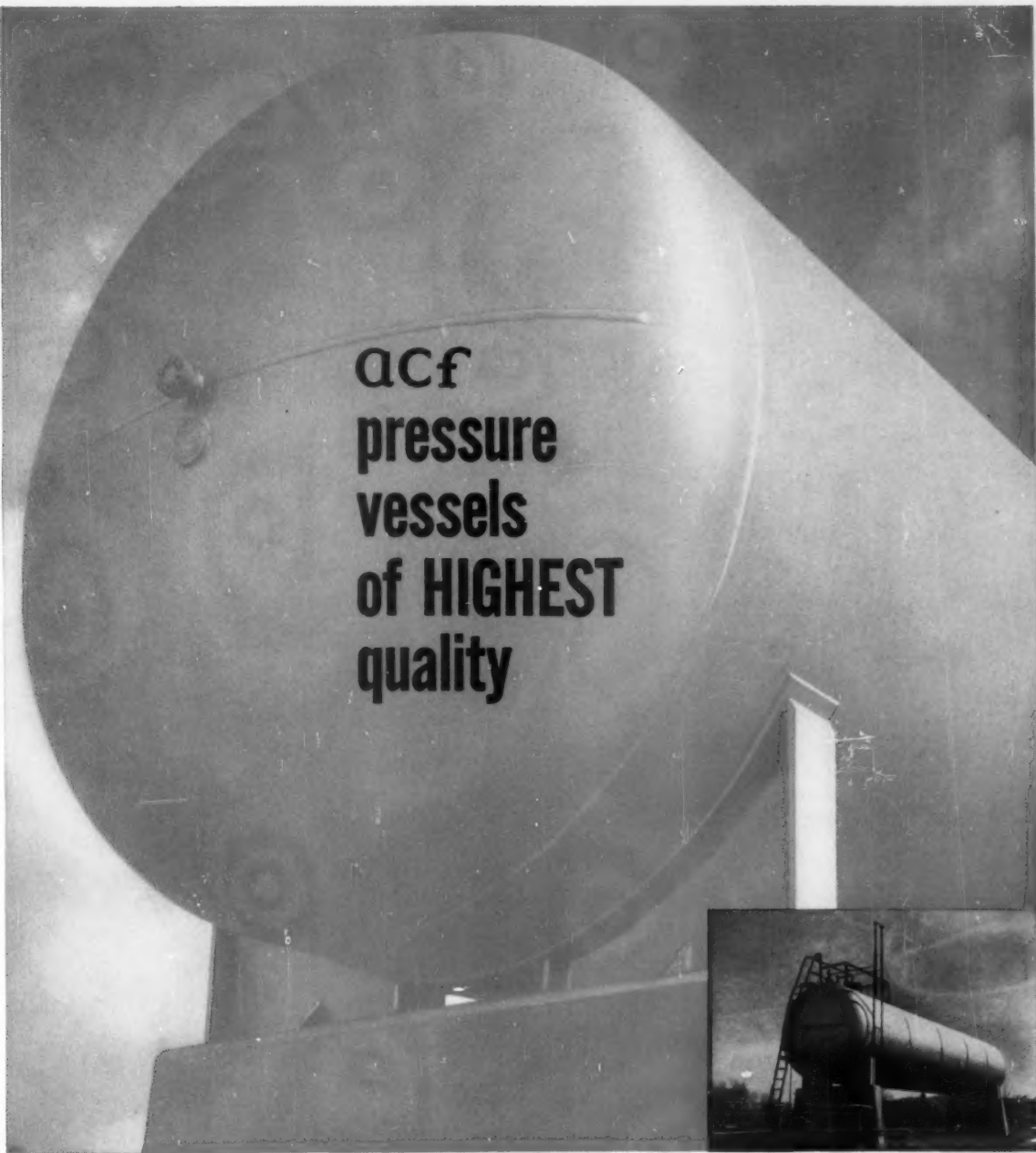
Small business supporting federal fair trade law	June 74
Federal fair trade bill clears one hurdle, still faces tough battle ahead	July 24
Federal fair trade bill still faces long battle	July 72
Supporters convinced Federal fair trade bill will pass if vote is ever taken	Aug. 23
Federal fair trade bill pigeon-holed for this year	Sept. 25
Farm income expected to decline from '58, will still top '57	July 25
Farm income holds '58 level, expected to drop soon	Sept. 25
Federal Trade Commission	
FTC's price trickery drive getting good support	Feb. 14
FTC cracking down on false advertising claims	Feb. 14
Harder selling of durable goods badly needed	June 16
Housing	
Let's look at 1959—housing	Jan. 35
Fresh boom in homebuilding industry expected	Feb. 14
Biggest construction year in history in full swing	June 16
Home construction sets record pace, should move even faster if housing bill passes	July 25
Another year of boom-rate home construction	Oct. 25
Housing boom slowing, but still healthy	Dec. 21
Jobless pay proposal may nick employers	June 16
Let's look at 1959—depressed areas	Jan. 35
Let's look at 1959—postal rates	Jan. 35
Minimum wage-hour law	
Let's look at 1959—minimum wage	Jan. 35
Extension of minimum wage-hour law has good chance to pass in 1960	July 25
Municipal utilities growth continues	Oct. 25
Near future financial forecast: higher interest, tighter money	Dec. 21
New federal wage law possible in '60	Dec. 21
Pre-merger requirement will probably pass	Apr. 11
President's budget is an effort to curb inflation	Mar. 21
Restrictive buying terms under consideration	Apr. 11
Seek to soften garnishment law	Apr. 66
Self-employed retirement funds awaiting Senate action	Dec. 21
Small business	
Let's look at 1959—small business	Jan. 35
Bad checks plague for small business	Apr. 68
Host of small business measures pending	May 118
Money for small business loans is scarce, encourages fee racket	July 25
Reforms asked for small business act	Aug. 23
New labor law important to all small firms	Nov. 25
New labor law protects small retailers in many ways	Nov. 72
Taxes	
Let's look at 1959—taxes	Jan. 32
No broad tax cuts or increases seen for 1959	Apr. 11
Double taxes in sight for firms doing business in two or more states	May 16
Tax deductions for retirement plans proposed	June 16
Minimum service charge taxable, new rule states	June 76
Late 1960 tax cut possible	Aug. 23
Treasury Dept. opposes pension plan tax break for self employed	Sept. 25
Tax depreciation law may be eased	Oct. 25
New highway fuel tax applies to LPG	Nov. 25
Tennessee Valley Authority	
Let's look at 1959—TVA expansion	Jan. 32
Eisenhower urging expansion of TVA's empire	Mar. 21
Congress supports TVA's bid to expand empire	Apr. 11
TVA gaining in fight to break away from Congress and taxpayer control	May 16
House to reach vote on independent TVA loan	May 120
Pacific Northwest "TVA" proposal in Congress	Sept. 25
New law means TVA will grow even faster	Oct. 25
With more money TVA should increase growth	Oct. 66
TVA sales up 6 per cent	Nov. 25
TVA plans to almost double present capacity	Dec. 21
Tight money situation to remain for at least six months	Aug. 23

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*Century Gas Equipment Marvel-Schebler Prods. Div. Borg-Warner Corp. 89 Chattanooga Royal Co. — Chevrolet Motor Div. — General Motors Corp. 10 Chicago Combustion Co. — *Cities Service Oil Co. 16 Coleman Co. — Corkens Inc. — Cribben & Sexton Co. —	*Magic Chef Div., Dixie Products 7 Manchester Tank & Equip. Co. — Master Tank & Welding Co. 57 Minneapolis-Honeywell Regulator Co., Water Heater Controls Div. — Mississippi Tank Co. 49 Mitchell, John E., Co. 24 Motorola Comm. & Electronics, Inc. — M-W Inc. —	*Union Carbide Corp., Linde Co., Div. 63 U. S. Steel Corp. — United States Steel Corp.— Pittsburgh Columbia-Geneva Steel— San Francisco National Tube Division— Pittsburgh Tennessee Coal & Iron— Fairfield, Ala. United States Steel Supply— Steel Service Centers United States Steel Export Company
Davis Engineering Corp. — Dearborn Stove Co. — Deere & Company — Dixon Valve & Coupling Co. — Dunham-Bush Co., Inc., Brunner Div. 69	Neptune Meter Co. 14, 15 Norco, Inc. — *North Texas Tank Co. 8, 9	*Viking Pump Co. 72
Elgin Softener Corp. — Ellis, Geo. D., & Sons, Inc. — Ellis Manifold Co. — *Ensign Carburetor Co. —	Ohio Foundry & Mfg. Co. —	Waldorf Heater Co. — Wallace William, Co. — Metalbestos Div. —
Fine Products Co. — Firestone Tire & Rubber Co. — *Fisher Governor Co. 55 Ford Motor Co. 40, 41	Parkhill-Wade 89 *Pasley Mfg. & Dist. Co. 58 Peacock Corp. — Phillips & Buttorff Corp. 67 Phillips Petroleum Co. — Powell Co., Wm. 47 *Pressed Steel Tank Co. Second Cover Purchase Plans, Inc. —	*Warren Petroleum Corp. Front Cover Weatherhead Co., The 4 Western Tank & Steel Corp. 90 Whitehead Mfg. Corp., D. W. — Wander Warm Co. — Wood Co., John 51
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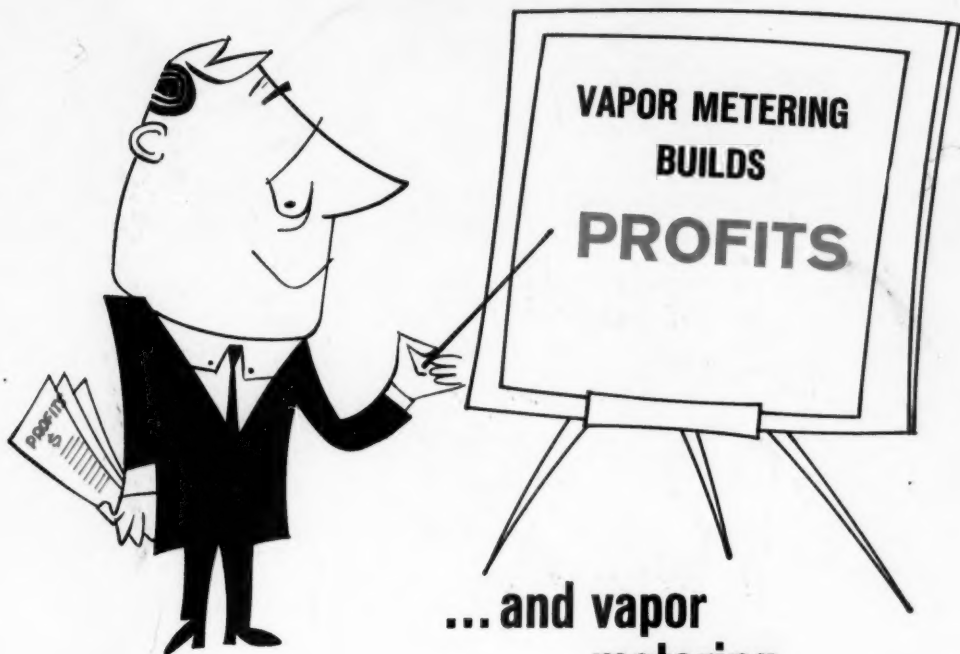
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